Independent Forest Audit

Red Lake Forest
2000-2005

kbm
FORESTRY CONSULTANTS INC.

Thunder Bay, Ontario

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ON THE COVER Waterfall located on an unnamed creek downstream of culvert installation on AOC 101, Field Site 10, Red Lake Forest.

1.0 Executive Summary iii
2.0 Introduction 1
2.1 Audit Process 1
2.1.1 Purpose 1
2.1.2 Audit Process Overview 1
2.1.3 The Audit Team 4
2.1.4 Guiding Principles 4
2.2 Forest Management Context 4
2.2.1 Location of the Red Lake Forest 4
2.2.2 Red Lake Forest Overview 5
2.2.3 Issues Impacting Forest Management 7
3.0 Summary of Audit Findings 8
3.1 Commitment 8
3.2 Public Participation 9
3.2.1 Local Citizens Committee 9
3.2.2 FMP Standard Public Consultation Process 11
3.2.3 Native Peoples Consultation 11
3.2.4 Annual Work Schedules Public Inspection 13
3.3 Forest Management Planning 14
3.3.1 Planning Team Activities 14
3.3.2 Resource Stewardship Agreements 14
3.3.3 Sources of Direction 15
3.3.4 Introduction 15
3.3.5 Management Unit Description 16
3.3.6 Objectives and Strategies/Management Alternatives 18
3.3.7 Operational Planning 20
3.3.8 Plan Review, Approval 22
3.3.9 Plan Amendments 22
3.3.10 Contingency Plans 23
3.3.11 Annual Work Schedules 23
3.4 Plan Implementation 23
3.4.1 Areas of Concern 23
3.4.2 Harvest 24
3.4.3 Renewal 25
3.4.4 Tending and Protection 29
3.4.5 Renewal Support 30
3.4.6 Access 30
3.5 System Support 31
3.5.1 Human Resources 31
3.5.2 Documentation and Quality Control 32
3.6 Monitoring 33
3.6.1 General Monitoring 33
3.6.2 Annual Report 35
3.6.3 Report of Past Forest Operations 36
3.7 Achievement of Management Objectives and Forest Sustainability 37
3.7.1 Achievement of Management Objectives 37
3.7.2 Review of RPFO Assessment of Sustainability 40
3.7.3 Review of the Comparison and Trend Analysis of Planned versus Actual Forest Operations 41
3.7.4 Achievement of Forest Sustainability 43
3.8 Contractual Obligations 45
4.0 Summary of Conclusions and Recommendations 49

List of Appendices

Appendix A: Comparison and Trend Analysis of Planned versus Actual Forest Operations Report
Appendix B: Roles, Responsibilities, and Qualifications of the Audit Team
Appendix C: The Eight Guiding Principles of the Independent Forest Audit
Appendix D: List of Acronyms
Appendix E: Summary of Input to the Audit Process
Appendix F: Public Survey
Appendix G: Public Notification

List of Tables

Table 1. Audit Sampling Intensity for the Red Lake Forest. 4
Table 2. Summary of Forest Operations Inspections for the Red Lake Forest. 33
Table 3. Review of the Assessment of Achievement of Management Objectives in the 1996-1998 RPFO. 37
Table 4. Review of the Achievement of Management Objectives from the 1998-2003 Red Lake Forest FMP. 38
Table 5. Review of the Progress Towards Achievement of Management Objectives from the 2003-2008 Red Lake Forest FMP. 39
Table 6. Actual versus Planned Harvest Areas and Harvest Volumes. 42
Table 7. Harvest versus Regeneration Treatment. 42
Table 8. Summary of Assessment of Forest Sustainability. 44
Table 9. Assessment of Achievement of the 2000 IFA Recommendations. 48
Table 10. Summary of Recommendations, Suggestions and Best Practices by Responsible Party. 49
Table 11. Summary of Recommendations, Suggestions and Best Practices. 50

List of Figures

Figure 1. Audit Field Site Locations on the Red Lake Forest. 3
Figure 2. Location of the Red Lake Forest within the MNR Northwest Region of Ontario. 5
Figure 3. Examples of the Red Lake Forest Landscape. 6
Figure 4. Summary of the Red Lake Forest by Crown Managed Land Type. 6
Figure 5. Summary of the Red Lake Forest Crown Managed Productive Forest by Working Group. 6
Figure 6. Eagle's Nest Discovered During Harvest Operations. 24
Figure 7. Slasher Ends Left on a Landing. 25
Figure 8. Examples of the Application of Snag Retention Guidelines. 26
Figure 9. Planting of Spruce in Bladed Strips. 26
Figure 10. Little Vermillion Prescribed Burn. 27
Figure 11. Mixedwood Site at Field Site 4. 27
Figure 12. Example of Full Tree Logging on an ES12 Site. 28
Figure 13. Beauregard Seed Orchard. 30
Figure 14. Cone-laden Black Spruce at Beauregard Seed Orchard. 30
Figure 15. Soil Erosion in Right of Way at Field Site 12. 31
Figure 16. Soil Erosion into Standing Timber at Field Site 12. 31
Figure 17. Road Repair Work as Result of Repair Order. 32
Figure 18. Stream after Removal of a Portable Bridge. 32
Figure 19. Wildlife Tracks at Field Site 5. 41

1.0 Executive Summary

This audit report for the Red Lake Forest (the Forest) is the result of an Independent Forest Audit (IFA) conducted by KBM Forestry Consultants Inc. under contract to the Ontario Ministry of Natural Resources (MNR). MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario (2003) requires that all Crown forests in Ontario undergo an IFA at least every five years. Regulation 160/04 of the Crown Forest Sustainability Act (CFSA) sets out the specific requirements for conducting the audits.

The Red Lake Forest audit covers the five-year period April 1, 2000 to March 31, 2005. Red Lake Forest Management Company Ltd. (RLFMCL) and MNR Red Lake District are the principal auditees. The Red Lake Forest is located in MNR's Northwest Region within the Red Lake District.

The Red Lake Forest lies within the Boreal Forest and comprises a total area of 315,613 hectares of which 215,617 hectares (or approximately 68%) are productive forest lands. Patent land (20,258 hectares) is included in the Red Lake Forest but excluded from the Sustainable Forest Licence (SFL) held by RLFMCL. The Crown has rights to timber on this land. Black spruce, jack pine and poplar are the principle tree species on the Forest. The Forest includes portions of three Provincial parks: Woodland Caribou Provincial Park in the west; Pakwash Provincial Park in the southwest; and Trout Lake Provincial Nature Reserve in the northeast. The Pipestone Bay-McIntosh Enhanced Management Area is also located within the Forest.

RLFMCL has held the SFL since April 14, 1999, and administers the Forest from its office in Red Lake, Ontario. RLFMCL is made up of two groups of shareholders. Class A shareholders are Weyerhaeuser Company, Abitibi-Consolidated Inc., and the Red Lake Independent Loggers Ltd. Class B shareholders are also the Red Lake Independent Loggers who hold 100% of the harvesting rights on the Forest. Terra Nova Forestry Consultants Inc. manages the Forest on behalf of RLFMCL.

Traditionally, the Red Lake Forest has supplied fibre to the Abitibi-Consolidated Inc. paper mill, Trilake Timber and Weyerhaeuser Trus Joist, all located in Kenora; Weyerhaeuser Company facility in Dryden, Weyerhaeuser Company in Ear Falls, and L.K.G.H. Contracting Ltd. in Red Lake.

Subject to satisfying the wood supply commitments associated with the SFL, Weyerhaeuser Company and Abitibi-Consolidated Inc. have first right of refusal on all wood harvested on the Red Lake Forest. Other major buyers include McKenzie Forest Products and the Bowater Inc. sawmill in Ignace.

The purpose of the IFA is to:

- Assess compliance with the Forest Management Planning Manual (FMPM) and the CFSA;
- Assess compliance of forest management activities with the FMPM, forest management plan(s) and the CFSA;
- Compare planned versus actual forest management activities;
- Assess the effectiveness of forest management activities in meeting forest management objectives;
- Assess the effectiveness of any action plans resulting from previous audits; and
- Assess a licensee's compliance with the terms and conditions of the SFL.

The audit team was impressed by the hands-on approach to forest management demonstrated by RLFMCL. As well, many MNR staff have extensive experience on, and a detailed historical knowledge of, the Red Lake Forest which complements the management work of RLFMCL. One Best Practice was given for RLFMCL's efforts with respect to negotiations on Resource Stewardship Agreements.

Based on the audit, 19 audit Recommendations were made. Recommendations can arise from audit team observations of material non-conformances, or may be developed to address situations in which the audit team identifies a significant lack of effectiveness in forest management activities.

Three key findings arising from the audit are discussed below. The audit team was concerned that operational scale full tree logging is being conducted on extremely shallow soil sites well in advance of conclusive results from an ongoing research study intended to determine whether or not this is a sustainable practice. A recommendation was developed for MNR Northwest Region to review the need to place additional conditions on the approval of full tree harvesting on extremely shallow soils.

Portions of the Red Lake Forest are characterized by fine textured soils that are, by their nature, susceptible to erosion. Road construction methods were observed that did not account for this fact. As a result, RLFMCL was directed to implement practices that minimize disturbance of fine textured soils.

Approximately 16,000 hectares were earmarked in 1999 for removal from the SFL as a result of the Ontario's Living Legacy Land Use Strategy, subject to replacement wood supplies being identified. One potential area for replacement wood supplies is complicated by land use and other significant planning decisions and processes occurring outside of the Area of the Undertaking. The audit team recommended that MNR take timely action to fulfill their commitment to identify replacement wood supplies, which could assist in addressing the projected decline in conifer wood supply on the Forest. This might involve commitment to an interim economical supply until final resolution of the replacement wood supply issue is reached.

The audit team concluded that, with the exceptions noted in the audit report, management of the Red Lake Forest was in compliance with legislation, regulations and policies and was effective during the term of the audit. The Red Lake Forest was also managed in compliance with the terms of SFL No. 542548 held by RLFMCL. Forest sustainability is being achieved as assessed through the Independent Forest Audit Process and Protocol. The audit team also recommended that the Minister extend the term of the SFL for the Red Lake Forest to March 31, 2028.

Rod Seabrook, CEA(SFM) EMS(LA)
Lead Auditor, on behalf of the Audit Team

2.0 Introduction

This audit report presents the results of the Independent Forest Audit (IFA) conducted by KBM Forestry Consultants Inc. (KBM) on the Red Lake Forest (the Forest) for the five-year period from April 1, 2000 to March 31, 2005. The audit covers the last three years of implementation of the 1998-2003 Forest Management Plan (FMP) and public participation, planning and implementation of the first two years of the 2003-2008 FMP. The Red Lake Forest is managed under a Sustainable Forest Licence (SFL) held by Red Lake Forest Management Company Ltd. (RLFMCL).

Throughout this audit report the reference to 'the Company' also refers to the RLFMCL. The principal auditees are RLFMCL and the Ministry of Natural Resources Red Lake District (MNR). Other auditees include Overlapping Licensees, contractors and other branches of MNR to the extent that forest management activities carried out by them are the subject of audit examination.

2.1 Audit Process

2.1.1 Purpose

The Independent Forest Audit Process and Protocol[1] (IFAPP) was developed by the Ministry of Natural Resources Forest Management Branch to provide a comprehensive and consistent method of evaluating forest management activities on Crown land. The IFAPP states that the purpose of an Independent Forest Audit is to:

- Assess compliance with the Forest Management Planning Manual[2] (FMPM) and the Crown Forest Sustainability Act[3] (CFSA);
- Assess compliance of forest management activities with the FMPM, forest management plan(s) and the CFSA;
- Compare planned versus actual forest management activities;
- Assess the effectiveness of forest management activities in meeting forest management objectives;
- Assess the effectiveness of any action plans resulting from previous audits; and
- Assess a licensee's compliance with the terms and conditions of the SFL.

2.1.2 Audit Process Overview

The IFAPP contains 158 criteria and 409 procedures, of which 336 apply to the Red Lake Forest audit. The audit procedures serve as a framework to provide a structured approach to evaluating whether or not forest management activities meet the requirements governing forestry practices on Crown land in Ontario.

The previous IFA conducted on the Forest was undertaken in 2000[4]. The implementation of actions to address the recommendations contained in the previous audit was examined during the course of this audit (see Section 3.8).

The audit process for the Forest consisted of six components:

A) Audit Plan[5]: KBM prepared an audit plan that described the schedule of audit activities, audit team members and participants, and auditing methods. The plan was submitted to MNR, RLFMCL, the Forestry Futures Committee (FFC), and the Chair of the Red Lake District Resource Management Advisory Committee, which serves the function of the Local Citizens Committee (LCC).

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[1] MNR. 2005. Independent Forest Audit Process and Protocol. Copyright © Queens Printer, 27 pp. + Appendices.
[2] MNR. 1996. Forest Management Planning Manual for Ontario's Crown Forests. Queen's Printer for Ontario. 452 pp.
[3] Crown Forest Sustainability Act, 1994, S.O. 1994 c. 25.
[4] AuditFor Inc. 2000. 1995-2000 Independent Forest Audit Report - Red Lake Forest SFL # 542548. 33 pp. + Appendices.
[5] KBM Forestry Consultants Inc. 2005. Red Lake Forest Independent Forest Audit Audit Plan. 17 pp. + Appendices.

B) Public Survey: KBM prepared a one-page public survey that was distributed to all organizations and to a random sample of one-third of the individuals listed in the 2003-2008 Red Lake Forest Forest Management Plan (FMP) mailing list provided by MNR. It was also sent to all Overlapping Licensees, contractors, commitment holders, tourist operators and members of the LCC. In addition, the public notice was posted on and available for download from KBM's web site (www.kbm.on.ca). The purpose of the survey was to solicit public input and to provide respondents with an opportunity to identify and discuss any site-specific concerns on the Forest. A copy of the survey can be found in Appendix F.

Notices were placed in five local newspapers (*The Northern Sun News* - Red Lake, the *Wawatay News*, the *Sioux Lookout Bulletin*, *The Dryden Observer* and the *Kenora Daily Miner & News*) soliciting public input on forest management activities on the Forest for the period under audit. A copy of the public notification can be found in Appendix G.

Five responses were received as a result of the public survey mail-out. A summary is presented in Appendix E.

C) Field Site Selection: The audit team carried out a preliminary site selection process prior to meeting with RLFMCL and MNR staff. Annual Work Schedules (AWSs) and Annual Reports (ARs) were used to ascertain the amount and type of forest operations carried out on the Forest during the course of the audit term. A stratified random sample of sites was then selected to ensure that selected sites were representative of activities conducted on the Forest during the audit term. A pre-audit meeting was held in Red Lake on August 15 and August 16, 2005. Much of the pre-audit was spent with RLFMCL and MNR conducting the preliminary site selection for the field portion of the audit.

D) Pre-audit Document Review: Prior to the nine-day site visit, the audit team reviewed documents provided by RLFMCL and MNR including, but not limited to the:

- 1998-2003 Red Lake Forest FMP,
- 2003-2008 Red Lake Forest FMP,
- 1991-1996 Report of Past Forest Operations (RPFO) for the Red Lake Forest,
- 1996-1998 RPFO for the Red Lake Forest,
- 2000-2004 ARs,
- 2000-2005 AWSs,
- Comparison and Trend Analysis of Planned versus Actual Forest Operations Report (TAR),
- 1995-2000 IFA Report for the Red Lake Forest,
- Action Plan for the Red Lake Forest 1995-2000 IFA, and
- Action Plan Status Report for the Red Lake Forest 1995-2000 IFA.

E) On-Site Audit: The audit team spent nine days on site conducting the field portion of the audit from September 12 to September 20, 2005. The audit team conducted interviews with staff from RLFMCL, MNR Red Lake District, MNR Northwest Region, MNR Finance and Business Services Branch, the Centre for Northern Forest Ecosystem Research, Planning Consultant to the RLFMCL, the Overlapping Licensees and wood supply commitment holders. The audit team also conducted interviews with LCC members at both an evening meeting with the LCC and, in some cases, separately. The audit team examined documents, records, and maps at RLFMCL and MNR offices, and spent three days in the field examining forestry practices at 26 field sites (Figure 1).

A closing audit meeting was held in Red Lake on September 20, 2005. The meeting provided a forum for the audit team to present and discuss preliminary audit results with RLFMCL, MNR, and the LCC representative.

KBM committed to a sampling range of between 10 and 25 percent of key activities and operations conducted on the Forest. Table 1 presents the sampling intensity of the field visits completed on the Forest. The objectives of the field site visits were to confirm that on-the-ground activities were conducted according to the FMP, conformed to provincial laws, regulations, and guidelines, and were

effective. A sample of all key forest management activities was examined on the ground. Due to access constraints the audit team relied on a helicopter to reach a number of the field sites.

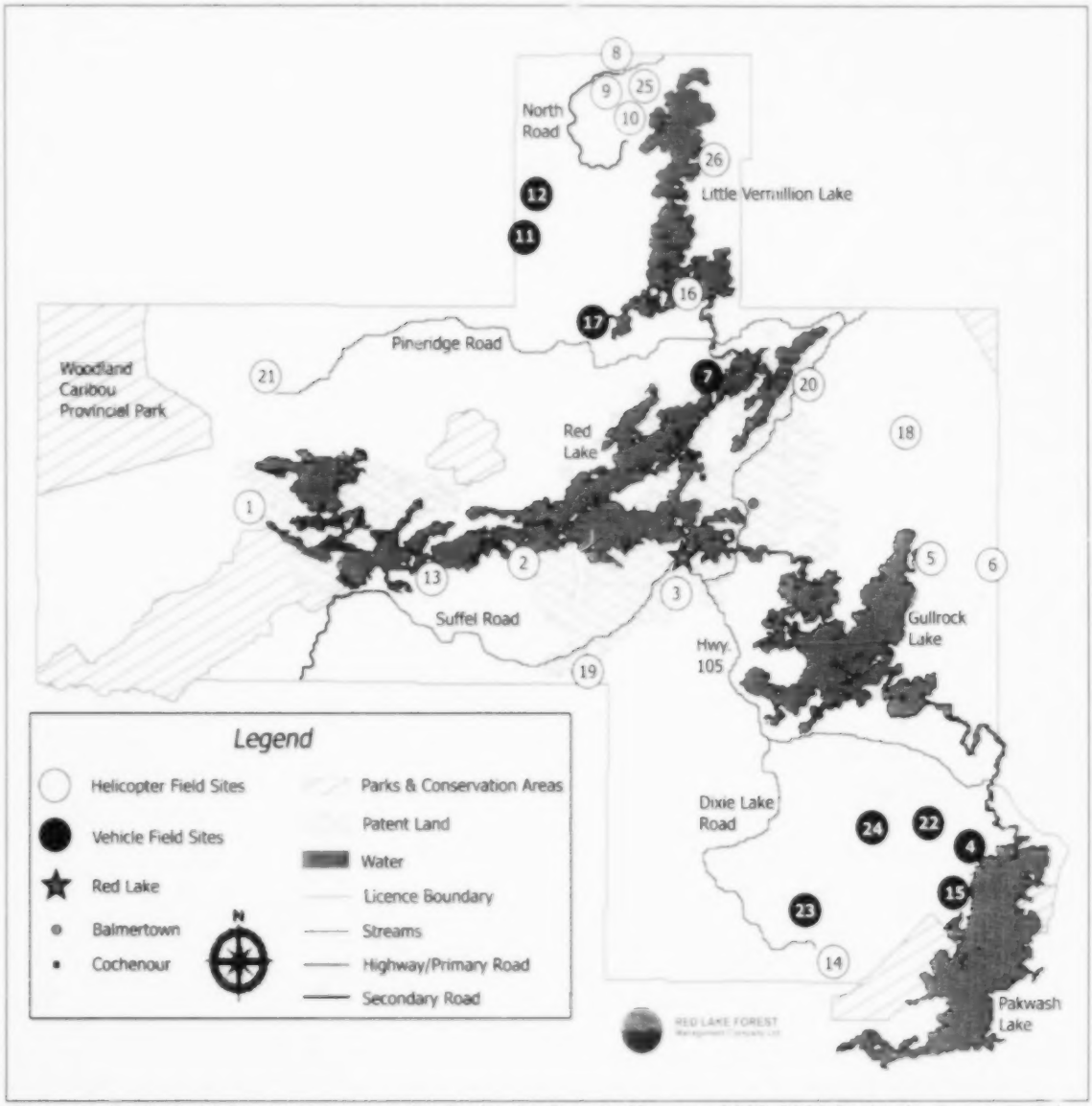

Figure 1. Audit Field Site Locations on the Red Lake Forest. (Source: 2003-2008 Red Lake Forest FMP.)

F) Final Report: The audit results are presented in conjunction with a brief description of the audit process and the forest licence area under review. Within the report, an important distinction is made between Recommendations and Suggestions. Recommendations draw attention to deficiencies in forest management that require corrective action. In most cases, Recommendations are a result of non-conformance to a law and/or policy, or specify a lack of effectiveness in forest management activities. Recommendations arising from this audit must be addressed in an action plan developed by RLFMCL in consultation with the District Manager and designated Regional and Forest Management Branch representatives of the MNR, as per Appendix E of the IFAPP. Suggestions are less serious in nature, and provide advice for improving particular aspects of forest management. The auditees are not required to address Suggestions in the Action Plan. A Best Practice highlights an exceptional management practice or high level of performance noted on the Forest.

Table 1. Audit Sampling Intensity for the Red Lake Forest.

Activity	Total Area/Number (2000-2005)[a]	Area/Number Sampled	Percent Sampled (%)
Harvest (ha)	7,800	1,880	24
Renewal (ha)	9,250	2,153	23
Tending (ha)	2,620	691	26
Free-to-Grow (ha) [b]	0	404	-
Areas of Concern Categories [c] (#)	8	5	63
Road Construction (km)	27	6.6	24
Road Maintenance (km)	788	370	47
Specified Procedures Review [d] (ha)	2,610	589	23

[a] Harvest, renewal and tending area is estimated based on four years actual and one year projected.
[b] Sample was conducted on area assessed after March 31, 2005.
[c] Areas of Concern (AOC) were grouped into broad categories to encompass the different types of AOCs present on the Red Lake Forest. Examples include fisheries/water quality, stick nests, tourism/recreation, and woodland caribou habitat. More than one AOC was associated with most sites selected for review of harvest and renewal operations.
[d] The Specified Procedures Review involved the verification of maps, records, and fieldwork associated with Forest Renewal Trust Account expenditures for 2003-2004.

2.1.3 The Audit Team

The audit was conducted by an independent audit team assembled by KBM under contract with MNR. The audit team consisted of six members:

- Rod Seabrook, CEA(SFM), EMS(LA), Lead Auditor and Wildlife/Ecology Auditor
- David Wilson, P. Eng., CEA, CEA(SFM), EMS(LA), Planning Auditor
- Ian McCormack, R.P.F., Harvest Operations Auditor
- Gabriele Aleksa, R.P.F., Silviculture Auditor
- Colin Arlidge, R.P.F., Forest Modelling (SFMM) Auditor
- Terri Dawyd, Audit Secretariat

Audit team members and their responsibilities are described in Appendix B.

2.1.4 Guiding Principles

The IFAPP identifies the components of the audit process. The audit protocol consists of principles, criteria, and procedures. The eight guiding principles are described in Appendix C. Each principle contains a series of criteria that guide the audit team during its assessment of the achievement of the principles. For each criterion a number of procedures serve to assess the auditees' compliance and effectiveness. KBM assigns each of the applicable procedures to an auditor who in turn examines the evidence for conformity to the procedure.

2.2 Forest Management Context

2.2.1 Location of the Red Lake Forest

The Red Lake Forest is located entirely within the Red Lake District of MNR's Northwest Region (Figure 2). Communities located within the boundaries of the Red Lake Forest include: Red Lake, Balmertown, Cochenour, Madsen, Starrat-Olsen and McKenzie Island. Aboriginal communities that are influenced by the Red Lake Forest include Pikangikum First Nation, Lac Seul First Nation and the First Nation people living in the Red Lake area.

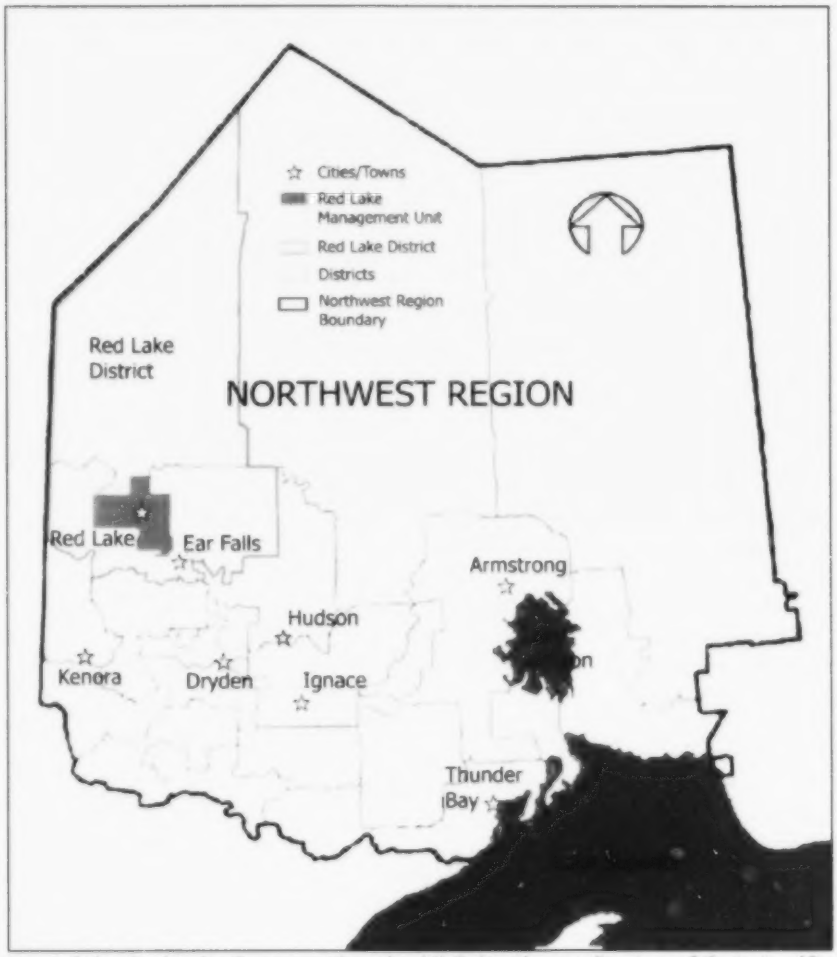

Figure 2. Location of the Red Lake Forest within the MNR Northwest Region of Ontario. (Source: 2003-2008 Red Lake Forest FMP.)

2.2.2 Red Lake Forest Overview

RLFMCL has held the SFL since April 1999, and administers the Forest from its office in Red Lake, Ontario. RLFMCL is made up of two groups of shareholders: Class A and Class B. Class A shareholders are Weyerhaeuser Company, Abitibi Consolidated Inc., and the Red Lake Independent Loggers Ltd. The Company is governed by a Board of Directors made up of two representatives from each of the three Class A shareholders. Independent loggers also constitute the Class B shareholders group and have 100% of the harvesting rights on the Red Lake Forest. Terra Nova Forestry Consultants Inc. was hired to manage the Forest on behalf of RLFMCL.

Traditionally, the Red Lake Forest has supplied fibre to the following: Abitibi-Consolidated Inc. paper mill, Trilake Timber and Weyerhaeuser Trus Joist (all located in Kenora); Weyerhaeuser Company facility in Dryden; Weyerhaeuser Company in Ear Falls; and L.K.G.H. Contracting Ltd. in Red Lake.

Subject to satisfying the wood supply commitments contained in the SFL, Weyerhaeuser Company and Abitibi-Consolidated Inc. have first-right-of-refusal for all wood harvested on the Red Lake Forest. Other major buyers include McKenzie Forest Products in Hudson and the Bowater Inc. sawmill in Ignace.

The Red Lake Forest lies within the Boreal Forest and comprises a total area of 315,613 hectares of which approximately 215,617 hectares (or about 68%) are productive forest lands (Figure 3). Patent

Figure 2: Location of the Red Lake Forest within the MNR Northwest Region of Ontario (Source: 2003 2008 Red Lake Forest FMP)

2.2.2 Red Lake Forest Overview

RLFMCL has held the SFL since April 1998, and administers the forest from its office in Red Lake, Ontario. RLFMCL is made up of two groups of shareholders: Class A and Class B. Class A shareholders are Weyerhaeuser Company, Abitibi Consolidated Inc., and the Red Lake Independent Loggers Ltd. The Company is governed by a Board of Directors made up of two representatives from each of the three Class A shareholders. Independent loggers, also constitute the Class B shareholders group and have 100% of the harvesting rights on the Red Lake Forest. Tembec Forest Industry Consultants Inc. are hired to manage the Forest on behalf of RLFMCL.

Traditionally, the Red Lake Forest has supplied fibre to the following: Abitibi-Consolidated Inc. (also the Trilake Timber and Weyerhaeuser Trus Joist (all located in Kenora); Weyerhaeuser Company Limited in Dryden; Weyerhaeuser Company in Ear Falls; and E.B.Eddy Forest Products Ltd. in Red Lake.

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The Red Lake Forest lies within the Boreal Forest and comprises a total area of 315,613 hectares of which approximately 215,617 hectares (or about 68%) are productive forest lands (Figure 3). Patent

land (20,258 hectares) falls within the boundaries of the Red Lake Forest, but is not included in the SFL. The Crown has rights to timber on this land.

Figure 3. Examples of the Red Lake Forest Landscape.

Figure 4 provides a summary of the Red Lake Forest by land type. Figure 5 provides a summary of the Red Lake Forest by working group. Black spruce, jack pine and poplar are the principal tree species on the Forest. Black spruce and jack pine each account for approximately 44% of the Crown Managed productive forest area while poplar and white birch working groups together make up about 11%. The remaining working groups (larch, white spruce, red pine, balsam fir and black ash) account for the final 1% of the productive forest and are grouped together in Figure 5 as Incidental Species.

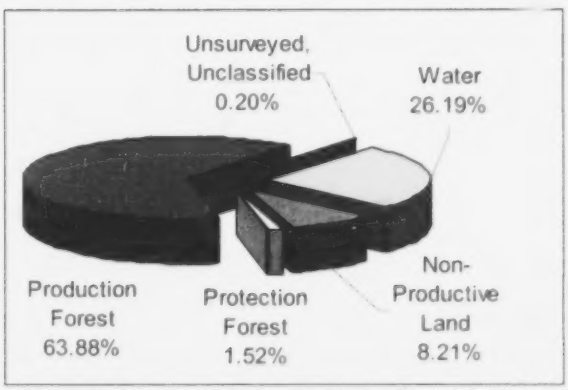

Figure 4. Summary of the Red Lake Forest by Crown Managed Land Type. (Source: Table FMP-1, 2003-2008 Red Lake Forest FMP.)

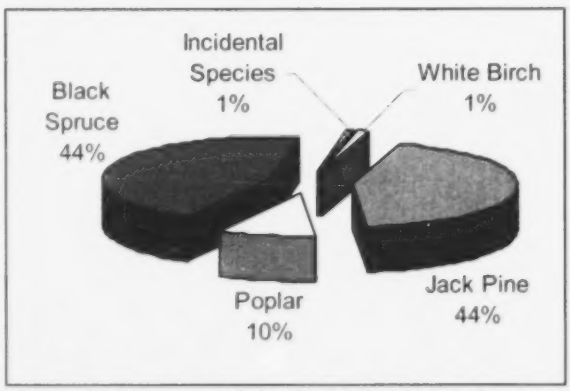

Figure 5. Summary of the Red Lake Forest Crown Managed Productive Forest by Working Group. (Source: Table FMP-2, 2003-2008 Red Lake Forest FMP.)

The park landbase within the Red Lake Forest increased by 4,507 hectares since the 1998-2003 Red Lake Forest FMP as a result of MNR's Ontario's Living Legacy Land Use Strategy[6] (OLL) as well as the revised Forest Resource Inventory (FRI). There are portions if three provincial parks on the Red Lake Forest: Woodland Caribou Provincial Park in the west; Pakwash Provincial Park in the southwest; and Trout Lake Provincial Nature Reserve in the northeast. The Pipestone Bay-McIntosh Enhanced Management Area is located within the Forest in the Remote Access Parks category. It protects identified values including park and tourism values and the headwaters of the Bloodvein River. Enhanced Management Area is a new land use category that was established as a result of OLL.

[6] MNR. 1999. Ontario's Living Legacy Land Use Strategy. Queen's Printer for Ontario.

2.2.3 Issues Impacting Forest Management

The IFAPP requires a review of high priority aspects (HPAs) of the auditees' systems or activities before the site visit takes place. HPAs can include significant management challenges that are inherent to the forest (e.g. presence of woodland caribou or extensive areas of sensitive soils), or can be specific issues that have arisen during forest management planning or plan implementation (e.g., conflicts with other forest users over proposed forest management activities).

The audit team requested that the auditees compile a list of HPAs for consideration during the audit. Following discussions with the auditees, two HPAs were identified and included in the Audit Plan. The audit team considered the HPAs during the conduct of the audit and findings are presented in Section 3 of this report.

- Conifer wood supply is predicted to decline by nearly 30% (approximately 43,000 m^3/year) by 2023. Large natural disturbance events (fire, blowdown and spruce budworm infestations) during the 1980s and 1990s have contributed to a significant age class imbalance on the Forest with approximately 35% of the production forest in the 1-20 year age class and over 50% being 40 years of age or less. The situation is complicated by the need to meet landscape level planning requirements, in particular as these apply to management of woodland caribou and marten habitat.

- The Red Lake Forest includes approximately 20,000 hectares of patent mining lands, on which the rights to all trees are reserved to the Crown. These lands are not classed as Crown forest under CFSA and are not part of the SFL. This was a traditional source of timber to local operators when the Forest was managed by MNR under the Crown Timber Act[7], and the area was included in the calculation of Available Harvest Area (AHA) prior to the 2003-2008 FMP planning term. However, RLFMCL and MNR have been unable to reach an agreement that would make this fibre supply available to the Company.

[7] Crown Timber Act, R.S.O. 1990, c.51.

3.0 Summary of Audit Findings

3.1 Commitment

An organization's policy acts as an important guide, providing a basis for making decisions in a consistent and reasoned manner. Policies help to ensure that decisions and actions undertaken by staff are related to the goals and objectives of the organization. MNR and RLFMCL have policy statements outlining their commitment to Sustainable Forest Management (SFM).

MNR's commitment to SFM is described in a number of policy documents including:

- the Policy Framework for Sustainable Forests[8];
- the Statement of Environmental Values[9];
- the 2000 policy statement Beyond 2000[10]; and
- the 2005 policy statement Our Sustainable Future[11] (released in February 2005 and therefore applicable only to the last two months of the audit period).

The above documents were readily available to MNR staff and interviews indicated that staff were aware of MNR's commitments to SFM.

RLFMCL established goals to direct it in implementing its Corporate Policy, including its commitment to:

- *Ethical and responsible management of forest resources for the continued enjoyment of all users;*
- *Maintain and enhance the viability of local businesses dependent on the forest resource;*
- *Forest land stewardship;*
- *Build expertise among shareholders and their employees in forest sustainability through-long term strategies;*
- *Participate with pride in the community in which we live and work.*

Principle 1 of the IFAPP, dealing with commitment, cites the CSA-Z809 standard as the source of various audit criteria associated with this principle. RLFMCL's SFM policy does not make explicit reference to a number of items listed in the criterion that address this principle. However, many of these commitments are already incorporated into the Company's day-to-day activities and therefore a suggestion is offered.

Suggestion 1: Red Lake Forest Management Company Ltd. should consider reviewing its policy statements outlining its commitment to sustainable forest management and incorporating references to the following items:

- **Respect for Aboriginal and treaty rights;**
- **Provide for public consultation;**
- **Provide conditions and safeguards for the health and safety of employees and the public;**
- **Encourage forest research; and**
- **Improve knowledge about the forest and sustainable forest management and monitor advances in sustainable forest management science and technology.**

Interviews conducted during the site visit indicated that RLFMCL staff members were aware of the organization's policies and the goals contained therein. The policy statement and associated goals were also distributed to employees as part of the training package and posted in the office in a highly visible location. Employee training is further discussed in Section 3.5.

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[8] MNR. 1994. Policy Framework for Sustainable Forests. 5 pp.
[9] MNR. 1995. Statement of Environmental Values. 6 pp.
[10] MNR. 2000. Beyond 2000. 20 pp.
[11] MNR. 2005. Our Sustainable Future. 21 pp.

3.2 Public Participation

3.2.1 Local Citizens Committee

As a requirement of forest management planning, an LCC must be established to assist the plan author and planning team in preparation of the FMP and to provide the MNR District Manager with advice when discretionary decisions are required. LCC members are appointed by the MNR District Manager to reflect and represent the range of interests in the area. The LCC is to act mainly in an advisory capacity, representing the public interest. Fundamentally, LCCs serve to provide a means for public involvement in forest management.

The LCC for the Red Lake District was represented by the Red Lake District Resource Management Advisory Committee (hereinafter referred to as the LCC). The LCC was established in August 1996 and members were appointed by the District Manager. The LCC membership included alternates who could participate in meetings concurrently with the actual member. This participation was encouraged to ensure that alternates remained current with issues and information presented.

The FMPM states that LCC membership is to include a range of interests in the area. Meeting minutes indicated that the LCC membership was reviewed as per the requirements of the 2004 FMPM Phase-In Provisions and that an effort was made to solicit representation from those interest groups not represented on the LCC. Representatives for small independent loggers and road-based tourist operators were successfully recruited; however, a number of interest groups that exist in the Red Lake area are not currently represented on the LCC. These include Local Business, Aboriginal Communities, and Other Crown Land Recreationalists such as snowmobile clubs, Chamber of Commerce/Economic Development Officers, and the General Public.

During the period under audit, there was no First Nation representation on the LCC. It is important to note that both Pikangikum First Nation and Lac Seul First Nation do not have direct road access to the community of Red Lake where the LCC meetings are held. This makes it inconvenient and expensive for persons to physically attend meetings on a monthly basis. However, there may be some opportunities for involvement through the use of technology that would not require travel to Red Lake. MNR should consider the use of teleconferencing, video-conferencing and web-conferencing as possible means of engaging the participation of remote-based First Nations on the Red Lake Forest LCC. To facilitate in-person attendance, MNR could also cover travel costs for First Nation representatives.

Suggestion 2: The Ministry of Natural Resources should consider the use of conferencing technology and/or travel subsidies to provide remote First Nations more accessible opportunities for participation on the Local Citizens Committee.

Interviews with LCC members suggested that LCC meetings were conducted in an open and inclusive manner. According to MNR, reports of LCC activities were available to the public at open houses held at stages two and three of the FMP planning process, as required. However, the reports were not reflective of the intended and required level of interaction between the LCC and the planning team. LCC interaction with the planning team was based in large part on the LCC planning team representative acting as an information conduit. The LCC nominated a representative and alternate to sit on the 2003-2008 Red Lake Forest FMP planning team, however their attendance was approximately 50%. The discussion that follows, regarding the effectiveness of the LCC, concludes with a recommendation and suggestions that address the subject of attendance as well as other concerns presented in the paragraphs that follow.

RLFMCL presented the draft FMP objectives and targets to the LCC at the beginning of the planning process with minimum feedback received. The LCC did not participate in the development of management alternatives or review planning team minutes and had limited involvement in the development of values maps. Attendance level was also a key issue with the LCC as a whole. During the audit term, 15 of 44 meetings (34%) did not reach quorum, including a six-month period in 2001 during the 2003-2008 FMP planning period. As a result, LCC involvement in the planning process was limited. Interviews with LCC members indicated they believed the lack of quorum impacted the ability of the LCC

to reflect a balance of views and to participate in the planning process in a meaningful way. Nonetheless, LCC members acknowledged the efforts of RLFMCL in making information available.

The LCC in the Red Lake District also participated in the planning process on three forests and the resulting demand on members' time was very challenging. Interviews with LCC members further indicated that members questioned the value of time and effort expended because they felt their concerns were not sincerely considered by MNR. This undertone of frustration may have had a role in the low attendance rate at LCC monthly meetings. MNR stated that they have acted on or accepted each recommendation or motion proposed by the LCC that concerned issues within the LCC mandate. There were motions, for example, regarding access and snowmobiling in Woodland Caribou Provincial Park and private boat cache regulations that were not acted upon because they clearly fell outside the LCC's mandate.

Interviews with MNR and RLFMCL indicated that the LCC did a good job of identifying issues of concern but did not have the capacity to get involved in the planning process at a substantive level. It was a general opinion of those interviewed that the LCC focused a lot of time and energy on non-forestry related issues which detracted from the time and resources needed to address requirements under the FMPM and LCC Terms of Reference.

The LCC Terms of Reference examined by the audit team was dated February 11, 1997 and, according to interviews with MNR, was the most recent version available. A review of LCC meeting minutes indicated that in early 2004 the LCC Chair suggested it was time to review the mandate of the LCC, as there was a sense of discontent and frustration. In March 2005 the LCC discussed the 2004 FMPM requirements and updating of the current Terms of Reference, which were based on the 1996 FMPM requirements. Interviews with MNR indicated that the LCC Terms of Reference had not been updated at the time of the audit. The audit team recognizes that the LCC Terms of Reference were not specifically required to be updated as part of the 2004 FMPM Phase-in Period requirements. However, a review and update of the LCC Terms of Reference to meet the requirements of the FMPM will address the issues discussed in this section of the audit report including:

- The level of commitment required of LCC members including attendance and expected workload;
- The need for a clear and communicated mandate; and
- The need for clearly defined and communicated roles and responsibilities of LCC members.

Recommendation 1: The Ministry of Natural Resources must update the Local Citizens Committee Terms of Reference to meet the requirements of Part A, Section 3.2.4 of the Forest Management Planning Manual and facilitate the effectiveness of the Local Citizens Committee in forest management planning.

Suggestion 3: The Ministry of Natural Resources should consider establishing minimum attendance requirements for membership on the Local Citizens Committee as part of the Terms of Reference.

MNR indicated they believe that the potential for meaningful participation by the LCC will improve over time as the knowledge level of committee members improves. In the interim, the audit team believes that some expert assistance through the use of a trained facilitator may bring focus and renewed energy to the LCC.

Suggestion 4: The Ministry of Natural Resources should consider the use of a facilitator in Local Citizens Committee meetings to ensure clear direction is determined and articulated through Local Citizens Committee meeting minutes, motions and resolutions.

RLFMCL presented AWSs and ARs to the LCC for inspection as evidenced by LCC meeting minutes. The role of the LCC in the review of FMP amendments is discussed in Section 3.3.9.

3.2.2 FMP Standard Public Consultation Process

The FMPM describes the specific requirements of public participation during the preparation of forest management plans. Public information centres for the 2003-2008 Red Lake Forest FMP were conducted in accordance with the FMPM requirements and included the issuance of public invitations to participate and other public notices within the required time frames. The evidence indicated that the public notices were published in the *Red Lake District News*. In addition to the print ads, two other media forums were used including the local cable channel (Invitation to Participate) and the local radio station (Notice of First Information Centre). Placing notices in other area newspapers such as the *Wawatay News*, *The Dryden Observer* and the *Kenora Daily Miner & News* could help to reach potential users of the Red Lake Forest.

Suggestion 5: The Ministry of Natural Resources should consider placing public notices in more than one newspaper.

Forest management planning public consultation notices were not placed in local publications in the Aboriginal media as required by the FMPM. The Wawatay News is northern Ontario's Native newspaper, publishing every second week and distributing to 81 First Nation communities. It publishes in English and the Aboriginal languages of Ojibway, Ojicree and Cree and serves the Nishnawbe-Aski Nation, Treaty 3 area including the Red Lake area and Robinson Superior Treaty area. The 2004 FMPM has modified the requirements for the involvement of Aboriginal communities in forest management planning, including the provision of notices to Aboriginal communities.

Recommendation 2: The Ministry of Natural Resources must ensure that forest management planning notices to Aboriginal communities meet the requirements of the Forest Management Planning Manual.

One issue was resolved through the standard issue resolution process. A local trapper was concerned with the amount of area being harvested on the Forest, particularly the decreasing amount of mature timber (suitable martin habitat) located on their trapline. The trapper felt that the loss of suitable marten habitat and removal of nuisance beavers resulting from timber harvest operations had been the main cause of fur production decline. As part of the resolution, MNR agreed to undertake an analysis of traplines contained within the Red Lake Forest, and in consultation with the trapping community, identify opportunities for alleviating impacts on individual traplines and means of acquiring more efficient economical use of traplines. The LCC was involved as required of the FMPM. A special meeting was convened by the LCC to meet with the concerned party and discuss the issue. Recommendations were provided to the MNR District Manager within the required timeframes. The trapper was working with RLFMCL to address concerns through the Area of Concern (AOC) process and MNR agreed to use a trapline reallocation process. In conclusion, the Issue Resolution process as required by the FMPM was followed.

Opportunities for requesting an individual environmental assessment (bump-up) were communicated to the public as required (identified in public notices, public correspondence, and at open houses). No bump-up requests were made during the audit period.

3.2.3 Native Peoples Consultation

The CFSA and the FMPM require MNR and the SFL holder to provide opportunities for Native (Aboriginal under the 2004 FMPM) communities to be involved in the forest management planning process. There are no Aboriginal communities located within the boundary of the Red Lake Forest, however Pikangikum First Nation and Lac Seul First Nation have traditional land use areas which extend into the Red Lake Forest and could potentially be affected by forest management activities. There is also a considerable population of Aboriginal people living in the town of Red Lake.

As required under the 1996 FMPM, separate Invitation to Participate notices were mailed directly to Pikangikum and Lac Seul First Nations offering them the opportunity to participate in the forest management planning process for the 2003-2008 Red Lake Forest FMP and providing them the option to

choose additional consultation. The 1996 FMPM also required that these notices be in the appropriate Native language unless the Native community indicated that it was not necessary. The two notices examined by the audit team were in the English language only, and evidence was not available to indicate that either First Nation absolved MNR of the requirement to create notices in the appropriate Native language. The 2004 FMPM has changed these requirements and requires public notices to be published in a specific Aboriginal language only when requested by the Aboriginal community. Due to the change in requirements, a recommendation is not warranted.

Under the 1996 FMPM Aboriginal communities had the option of participating in the regular public consultation process or choosing the additional consultation, referred to as the Forest Management Native Consultation Program (FMNCP). Neither Pikangikum or Lac Seul First Nations chose to participate in the planning process for the 2003-2008 Red Lake Forest FMP through the FMNCP or the standard public consultation process. However, interviews with representatives from MNR and RLFMCL indicated that the native values map and native background information report for the 2003-2008 FMP were prepared by off-reserve Lac Seul First Nation members in Red Lake and by representatives of Pikangikum First Nation (initially for Whitefeather Initiative - see discussion that follows - but also applicable to the Red Lake Forest).

Pikangikum First Nation is currently in the midst of planning tasks under their Whitefeather Forest Initiative (the Initiative). In 2000, Pikangikum First Nation received a commitment from MNR with respect to the Initiative, conditional upon completion of a set of planning tasks. The Initiative is Pikangikum First Nation's intent to acquire commercial forest licence management and planning responsibilities and related opportunities for the Whitefeather Forest Planning Area, north of the Red Lake Forest.

To stress the value of involving the local Aboriginal communities in the management of the Red Lake Forest, the audit team considered suggesting that MNR personally contact each Aboriginal community and extend an offer to discuss opportunities for involvement in the forest management planning process. The 2004 FMPM has revised the First Nation consultation process to allow the MNR and the Aboriginal community the opportunity to develop a consultation approach together. It requires that the District Manager contact each Aboriginal community to *discuss the opportunities to be involved in the planning and implementation of the forest management plan.* Consequently, a suggestion is not warranted as the requirements under the 2004 FMPM must be met.

MNR and RLFMCL made efforts to involve communities in the benefits of forest management. RLFMCL made a formal offer to Pikangikum First Nation for silvicultural work and training opportunities in harvesting and equipment operation several years ago, but no interest was expressed. Although these efforts on the Red Lake Forest have not resulted in substantial opportunities, MNR's work to establish Whitefeather is a significant undertaking that will provide potentially substantial opportunities to Pikangikum First Nation.

Term and Condition 77 reports (now Condition 34 of the Class Environmental Assessment (EA) Declaration Order[12]), documenting efforts regarding negotiations by MNR with Aboriginal communities regarding benefits from forest management planning, were completed for the first four years of the audit term. Further discussion on this topic is contained in Section 3.6.2.

The audit team sent individual letters of invitation to Pikangikum First Nation and Lac Seul First Nation informing them of the IFA of the Red Lake Forest and asking for their participation. No response was received to the letters. The aforementioned First Nations and all other Aboriginal organizations on the MNR District FMP mailing were also sent the public participation survey and none were submitted. The audit team unsuccessfully tried to arrange interviews with representatives of Pikangikum First Nation, Lac Seul First Nation and an Aboriginal trapper.

[12] Ministry of the Environment. 2003. Declaration Order regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario. 48 pp.

3.2.4 Annual Work Schedules Public Inspection

The FMPM outlines the public inspection requirements for AWSs, aerial herbicide programs, insect pest management programs, and prescribed burns. MNR's records of the availability of AWSs for public inspection, including notices and mailing lists, were examined for each year of the audit period. The evidence maintained on file was inconsistent throughout the audit term and made it difficult to assess conformity to the requirements. AWS Public Inspection notices that were on file met FMPM information requirements.

Available mailing lists did not clearly identify an individual's or an organization's affiliation or interest in the Forest. Therefore it was difficult to assess whether *all those persons having an interest in, or who are directly affected by, operations which are scheduled to be carried out during the term of the AWS* were notified, as required by the FMPM.

Suggestion 6: The Ministry of Natural Resources should consider including a field in each of the mailing lists created and used throughout the forest management planning process, that identifies a person's or organization's interest and/or affiliation on the Forest.

The 2004 FMPM requires MNR to publish a Notice of AWS Public Inspection in local publications in the Aboriginal media. This requirement was applicable to the 2005-2006 AWS and the notice would have had to be published during the audit period to provide the required amount of advance notice. Interviews with MNR staff indicated that the Notice of AWS Public Inspection for the 2005-2006 AWS was not placed in any local publications in the Aboriginal media. The 2004 FMPM has modified the requirements for the involvement of Aboriginal communities in forest management planning, including the provision of the Notice of AWS Public Inspection.

Recommendation 3: The Ministry of Natural Resources must ensure that the Notice of Annual Work Schedule Public Inspection to Aboriginal communities meets the requirements of the Forest Management Planning Manual.

Aerial herbicide programs occurred in the fall of 2001, 2002 and 2005 (2004 program was postponed until 2005). The aerial herbicide program that occurred in 2005 falls outside of the audit period and is therefore not discussed in this report. A public notice advertising the 2001 aerial herbicide program was published in one local newspaper 28 days before the anticipated first day of application, just short of the FMPM requirement of *at least 30 days before the anticipated date of application*. The public notice ran a second time in the same newspaper as required (*as least 7 days before the anticipated date of application*). A copy of the direct written notice that was issued by the District Manger and the associated mailing list was also on file for this year. RLFMCL received a letter in response to the District Manager's letter from a concerned trapper on the Red Lake Forest. There was no evidence on hand that a response was provided by either MNR or RLFMCL to the concerned individual.

Photocopies of the public notices that were published in the local newspaper in advance of the 2002 aerial herbicide program were provided, indicating both the date of publication and the newspaper they appeared in. The public notices were published on July 3 and July 31, 2002 and advertised an anticipated start date of August 1, 2002. A copy of the direct written notice dated August 6, 2002 issued to selected individuals was on file with the associated mailing list and indicated that the aerial application of herbicide would occur between August 15 and September 15, 2002. Since copies of these notices were the only evidence on file, it is not clear whether the 2002 aerial herbicide program met the 30-day advance notice requirement.

Slash pile burning occurred in 2001, 2002, 2003 and 2004 on the Red Lake Forest. A prescribed burn was scheduled in 2000, but had to be postponed until the next year due to poor burning weather. The audit team based their findings on incomplete files as the amount of documentation filed each year was inconsistent over the period of the audit. For example, a photocopy of the public notice for the slash pile burn that occurred in 2002 was kept on file, but evidence of the date of publication, the newspaper the

public notice appeared in and the mailing list used for the direct written notice were not kept on file. The direct written notices and public notices that were maintained on file met the requirements of the 1996 FMPM.

Recommendation 4 addresses the need for maintaining complete public consultation and notification records to demonstrate that all requirements are being met.

Recommendation 4: The Ministry of Natural Resources must ensure that accurate and complete records of Annual Work Schedule public notifications are maintained to demonstrate that Forest Management Planning Manual timing requirements are met.

3.3 Forest Management Planning

3.3.1 Planning Team Activities

The planning team for the 2003-2008 Red Lake Forest FMP was established and approved by the District Manager as required by the FMPM. Composition of the planning team was appropriate and included RLFMCL foresters, MNR foresters, an MNR biologist and MNR technician, a Class B shareholder, and an LCC representative and alternate. The planning team also included an FMP planning consultant employed by RLFMCL. The planning team was chaired by the plan author, a Registered Professional Forester (R.P.F.).

A Terms of Reference (TOR) was developed and approved in a timely fashion and the roles and responsibilities of the planning team were clearly defined. Additional expertise was also identified in specific areas such as GIS, fire, and cultural heritage. A detailed timeline was established and followed by the planning team setting out the various stages of the planning process and the opportunities for public consultation. The TOR required that each planning team member attend all planning team meetings, except for the planning consultant. A review of attendance records indicated that attendance requirements were not met, with an overall average attendance record of 65%. It was unclear as to whether attendance by each member at all meetings was essential to efficient planning and, therefore, this requirement is worthwhile reviewing in future.

Recommendation 5: The Ministry of Natural Resources must ensure for future plans that planning team participation requirements, described in the planning team Terms of Reference, are accurately defined and followed.

Twenty-two planning team meetings were held and all scheduled planning milestones were met.

Thirty-four public inquiries were documented during FMP preparation. All inquires were responded to by the Plan Author and/or other planning team members, most through in-person meetings between RLFMCL staff and the interested party. Nineteen meetings were held with separate interested public and stakeholders to discuss specific concerns and planning issues.

Results of interviews with the planning team members, LCC, MNR and stakeholders indicated a strong belief that the planning team addressed all public concerns. Some commented that the FMP was one of the most complete and comprehensive they had seen.

A comparison of plan contents with FMPM requirements indicated a good effort at fulfilling all requirements, with few exceptions.

3.3.2 Resource Stewardship Agreements

In 1997, the Ontario Government announced its Resource-Based Tourism Policy[13] and recognized the resource-based tourism industry as a significant factor in Crown land and resource allocation.

[13] MNR. 1997. Resource-based Tourism Policy. 3 pp.

In 2000, the Tourism and Forestry Industry Memorandum of Understanding[14] (MOU) was signed by the Minister of Natural Resources, the Minister of Northern Development and Mines, the Minister of Tourism, forest industry representatives and resource-based tourism representatives. The MOU established a framework for the resource-based tourism and forestry industries in Ontario to negotiate Resource Stewardship Agreements (RSAs) to permit both industries to co-exist and prosper. The MOU sets the general principles and minimum content for an RSA. For 2003 FMPs, every reasonable effort was to be made to pursue RSA development, with the full process for developing RSAs being required for 2004 FMPs.

An RSA is a voluntary agreement between the SFL holder and a licensed resource-based tourism (RBT) operation based within the boundaries of the forest or an adjacent forest. The two businesses agree on certain things (e.g. recognized tourism values, forest management prescriptions including road use management strategies) that are proposed to be added to the FMP in order to protect tourism. The proposal becomes input into the development of the next FMP (or an amendment to the existing one) and does not take effect until approved by MNR as part of the FMP (or amendment).

The 2003-2008 Red Lake Forest FMP contained a statement confirming the commitment to maintain the viability of the tourism industry by protecting tourism values in the FMP process through the application of the Management Guidelines for Forestry and Resource-Based Tourism[15]. The FMP also confirmed the use of RSAs as one method of protecting and sustaining these values as required.

A commendable effort was put forth by RLFMCL to implement the full RSA process well in advance of the requirements. Twenty four RBT operators were contacted and offered the RSA process as an option. The first letters were sent in July, 2001, and continued thereafter. Discussions were initiated with a number of RBT operators to determine their interest in the process. Most of the concerns raised by the tourist operators were addressed through the standard FMP planning process and the protection of tourism values through application of AOC prescriptions. Eventually, three RSAs were negotiated.

Best Practice 1: The audit team commends Red Lake Forest Management Company Ltd. on their efforts in implementing the Resource Stewardship Agreement process well in advance of the full requirements.

3.3.3 Sources of Direction

Forest management planning relies upon numerous sources of direction including provincial legislation, MNR policy and guidelines, legal commitments, regional strategic direction, and local land use and resource management plans. MNR is responsible for identifying the relevant sources of direction to ensure forest management planning teams are aware of, and have access to these items. Interviews with RLFMCL and MNR and a review of the FMP indicated that the appropriate sources of direction were made available and were used by the planning team. The sources of direction were listed in the Supplementary Documentation of the 2003-2008 FMP.

3.3.4 Introduction

The Environmental Bill of Rights[16] requires that each designated Ministry develop a Statement of Environmental Values (SEV). The SEV guides ministry staff when making decisions that may have an effect on the natural environment and serves as a benchmark against which the public and the Environmental Commissioner may evaluate ministry decisions.

The FMPM requires that each FMP include in its introduction a brief description of how MNR's SEV was considered during plan FMP development. This is done in the form of an SEV briefing note. The 2003-

[14] MNR. 2000. Tourism and Forestry Industry Memorandum of Understanding. 3 pp. + Appendix.
[15] MNR. 2001. Management Guidelines for Forestry & Resource-Based Tourism. Queen's Printer for Ontario. 24 pp. + Appendices.
[16] Environmental Bill of Rights, 1993, S.O. 1993, c. 28.

2008 Red Lake Forest FMP contained the appropriate information regarding MNR's SEV in the main text and the Appendices.

3.3.5 Management Unit Description

The 2003-2008 Red Lake FMP provided a description of the Forest including its administration, geology and soils, historic and current forest condition and wildlife. The description gave an accurate overview of the Red Lake Forest at the time of plan preparation.

The description of the formation of the land types, geology, soils and sites was thorough and complete. The differences in the silvicultural investment based on site productivity were tied to the objectives and strategies in the FMP. The historic Forest condition, describing the resulting forest types in relation to natural disturbances such as fire, high winds and spruce budworm damage, was well done. The influence of past logging practices on forest species was also described.

The FRI was updated for both the 1998-2003 FMP and 2003-2008 FMP. In the case of the 1998-2003 FMP, the FRI was updated in 1994 and was based on a 1984 inventory. Depletions, Barren and Scattered (B&S), and Free-to-Grow (FTG) areas were also updated to 1994. The FRI for the 2003-2008 FMP was updated, including harvest and natural depletions since 1997 and areas declared FTG. The aerial photography for the updated inventory used for the 2003-2008 FMP was completed in the fall of 1997 and captured depletions from 1994 to 1997 not accounted for in the previous update. The new inventory was completed in August 2000 in time for the FMP planning process to begin. In order to create the most up-to-date FRI possible for the preparation of the plan, depletions recorded in the ARs for 1997, 1998, and 1999 were transferred to the new inventory to update it to 2000.

Discussions with MNR indicated that the Red Lake District office received a copy of the updated inventory which was used for the preparation of the FMP. Working copies of the FRI were submitted periodically and the final version was also submitted. There was no record of the exact date the FRI was made available, but MNR staff stated that it was received at an acceptable time to allow modelling to be conducted.

The field audit determined that the FRI was generally accurate. Observation of similar stand types adjacent to harvest areas indicated consistency between the FRI and actual stand types. Discussions with MNR district staff and RLFMCL staff supported the field observations.

MNR is responsible for the collection and maintenance of values information. RLFMCL is also required to notify MNR of any previously unmapped values encountered during operations. The public may also add new values information, subject to verification by MNR. The audit team confirmed that values identified by the public during Information Centres held for the 2003-2008 Red Lake Forest FMP (outpost cabin, stick nest) were captured in MNR's natural resource values information system layer (NRVIS), an electronic database.

Updates to the values information for planning of the 2003-2008 Red Lake FMP were discussed with the current MNR biologist. The biologist involved in values collection during FMP preparation was not available for interview. MNR Red Lake District conducts winter aerial moose population surveys on each Wildlife Management Unit (WMU), two of which straddle the Red Lake Forest. During these flights, other values such as stick nests are noted and added to the values information layer. Surveys were conducted on WMU 2 in 2000 and 2001 and on WMU 3 in 1998, 2001 and 2004. Separate stick nest surveys were conducted in 2000 and 2001. Other routine flights by MNR staff contribute additional values information or confirmation of existing information (e.g. stick nest occupancy). Fisheries information was derived from lake su .ys conducted from the 1960s to the 1980s.

MNR maintains the values information in NRVIS. They have developed and implemented a protocol to bring consistency to the capture and entry of values information. The District sets aside one day per week whereby staff in the Geographic Information System (GIS) department focus on NRVIS.

MNR Red Lake District has survey information on woodland caribou for every decade dating to the 1940s, with 26 separate surveys having been conducted within that time. The information is in both mapped and written form and includes actual sightings of animals or tracks. Many woodland caribou sightings came from the public and forms were available from the District for this purpose. A single woodland caribou was captured and equipped with a radio collar in 1997. The collar provided additional information over an approximate two-year period on the animal's specific movements across the Red Lake Forest. MNR has used all of this information to assist in defining the area within which to focus woodland caribou management efforts.

The Socioeconomic Impact Model (SEIM) analytical model utilizes wood supply forecasts from the analysis of management alternatives from the Strategic Forest Management Model (SFMM) model. The outputs from SEIM provide socioeconomic indicators (jobs, salaries/wages, value added and housing prices) to help the planning team, LCC and others to evaluate the various management alternatives. The use of SEIM is optional under the 2004 FMPM. However, a socioeconomic analysis is still required, using either a social and economic model or a qualitative analysis, and the methodology must be documented in the FMP.

The 2003-2008 FMP provided a demographic profile for wood flow from the Red Lake Forest, based on 1996 census and economic information. Information was provided for Red Lake, Ear Falls, Kenora, Dryden, Sioux Lookout and Pikangikum First Nation. The proportion of the total labour force dependent on the forest industry was estimated for the communities. Red Lake indicated a dependency of 7.4% while Dryden was 24%, reflecting the presence of a large pulp and paper mill in that community. The description of the forestry industry economic environment included information on number of employees, production, and fibre sources for the Abitibi-Consolidated Kenora paper mill, Weyerhaeuser Company Dryden pulp and paper mill and the Weyerhaeuser Company Ear Falls sawmill. However, there was no similar economic information included for TriLake Timber Kenora sawmill (since defunct) and LKGH Contracting Ltd. sawmill (Red Lake), which were also dependent on the Red Lake Forest wood supply to some extent during FMP development.

Despite there being a number of non-industrial uses of the Red Lake Forest, including tourism, there was a lack of required information on these users. In addition, there was no data, trends or expectations provided for tourism – e.g. (increase in lodges/capacity, roads, upgrades). The audit team concluded that the socioeconomic information was incomplete for industrial and most particularly non-industrial uses. The 1996 FMPM acknowledges that preparation of a complete profile requires the cooperation of all forest users and that the completeness of the profile depends on the information that is available. Some of the desired information on non-industrial uses for which information was likely readily available, was not present in the FMP (e.g. company/business names, number of visitors). Given the importance of tourism in particular to the area economy and the interaction between tourism and forestry, the audit team believes that all reasonable efforts should be made to collect socio-economic information from this sector. Such information will be of assistance in evaluating management alternatives.

Should individual businesses be unwilling to share specifics about their operations, other sources of useful information could include local Chambers of Commerce, business associations and government ministries.

Recommendation 6: The Ministry of Natural Resources must make all reasonable efforts to ensure, for the 2008-2018 FMP, that the socioeconomic description includes detailed information on non-industrial and non-commercial users of the Forest and associated data, as prescribed by the Forest Management Planning Manual.

Information provided in the socioeconomic profile was expressed in terms of potential economic effects on the forestry industry. Related economic metrics were acceptable, with the exception of local specifics on operators and facilities in the Red Lake area and the potential benefits/impacts of forestry activities on their operations.

Information provided on non-industrial activities such as tourism was not sufficient to define their economic value and relationship to forestry activities and allow a balanced evaluation of management alternatives. For example, a particular management alternative may increase or decrease the economic viability of individual tourist operators or tourism across the Forest; however this impact is not assessed by the model. Rather, the outcomes of each alternative are assessed, from an economic perspective, against the amount of available harvest area. The implications of the various management alternatives on tourism in general or individual tourism operations are not specifically addressed with data available in the profile (e.g. there was no data on specific operators, locations, investment intentions and connection to the Forest and the FMP). This situation is not unique to planning on the Red Lake Forest, and reflects limitations associated with the current approach to evaluating socio-economic impacts of forestry on non-timber interests.

Suggestion 7: The Ministry of Natural Resources Forest Management Branch should consider developing economic metrics for non-industrial benefits.

3.3.6 Objectives and Strategies/Management Alternatives

The four CFSA objective types (forest diversity, social and economic, provision of forest cover, and silvicultural/harvest) were addressed specifically with defined targets and strategies. Thirteen objectives were defined. The provision of forest cover objectives were grouped and assimilated into other objectives depending upon whether they were intrinsically forest diversity objectives or social and economic objectives. Objective 2 related to old growth retention. Evidence showed that specific targets linked the FMP text and the modelling. Objective 4 related to wildlife habitat supply. The modelling was done very well in this respect. A woodland caribou mosaic was properly implemented in the SFMM using spatially and temporally defined subunits. Marten core deferral areas were used.

The planning team discussed an issue related to the possible inclusion of the patent landbase area into the available forest landbase for SFMM modelling. This issue was correctly resolved. The SFMM landbase used for the FMP did not include any patent land.

The Natural (Null) run was used to provide a basis for calculating the Bounds of Natural Variation (BNV). Preferred wildlife habitat minimum targets were set for the featured species to ensure that no species would see preferred habitat reductions below 20% of the BNV. Objective 7 related to the sustained wood supply. Wood supply targets and harvest volume fluctuation between terms were set in SFMM properly, and linked to the FMP text explicitly. Silvicultural objectives supported the achievement of the other 13 objectives and included strategies and targets that were evident in the SFMM cases (e.g. renewal proportions and limits, Barren and Scattered (B&S) rehabilitation rates, Forest Management Guide for Natural Disturbance Pattern Emulation[17] (NDPEG) implementation, red/white pine strategies).

The four mandatory alternatives and one additional management alternative were developed and discussed in detail. They included Nature/Null, Timber Production Potential (TPP) infinite funding, TPP balanced funding, DEMAND (maintenance of current industry operating levels), and a Selected Management Alternative (SMA). These management alternatives all shared common SFMM constraints, where appropriate, so that a fair comparison could be made. The woodland caribou mosaic constraints, marten deferrals, wildlife minimum preferred habitat targets and other biological constraints were common to all alternatives. The SMA differed from the DEMAND alternative mainly in the Intolerant wood supply targets. All the harvesting alternatives produced potential outcomes that were consistent with the objectives because the appropriate SFMM modelling constraints were applied to them all equally. There were only minor differences in the outcomes.

The woodland caribou mosaic is a significant landscape impact that influences wood supply (social and economic objectives). It would have been desirable to have considered alternative woodland caribou mosaic (spatial and temporal) scoping runs. Clearly, the Red Lake Forest is challenged in its future ability

[17] MNR. 2002. Forest Management Guide for Natural Disturbance Pattern Emulation. Queen's Printer for Ontario. 24 pp. + Appendices.

to maintain the DEMAND wood supply targets while at the same time implementing the landscape objectives as they relate to woodland caribou and marten. There is no margin that allows for the potential risks of any future fire or catastrophic wind events without further worsening the wood supply outlook. One option could include developing alternative woodland caribou mosaic scoping runs temporally (i.e. scheduling C blocks as B blocks) and then testing the wood supply scenarios.

RLFMCL and MNR both support the management of woodland caribou and marten, and both parties want to plan a wood supply that meets the economic objectives with the least amount of risk possible. Not exploring alternative woodland caribou mosaic configurations is inherently risky as it relates to wood supply. If this were a large forest with ample wood supply and ample ability to manage woodland caribou solely within the boundaries of the Forest, then this would not be a concern. However, this is not the case. In the interest of making an accurate trade-off analysis between wood and wildlife, one would need to test more than one wildlife scenario. In that all the management alternatives in the 2003-2008 FMP were built upon only one wildlife scenario, the ability to evaluate a range of wood supply outcomes was rather limited.

The consequence of implementation of the woodland caribou mosaic was that all the harvest area will be concentrated in the Moose Zone for 20 years (Terms 2 and 3). The FMP text identified that this may present challenges in administering the conflicting interests of the many stakeholders on the Forest (trappers, recreation, etc.). The planning team identified this potential issue and yet they could do nothing to alter this due to the temporal definition of the woodland caribou mosaic that affects all alternatives equally. MNR suggested that OLL replacement wood supply may become available in the future to mitigate this issue. This is further discussed in Section 3.7.1.

The methodology and assumptions used in the SFMM modelling were excellent, based on the best available information and satisfied all requirements. The description of the landbase in its subunits, the development of the many yield curves and successional pathways, the estimate of fire cycling, the linkages between operability ages, succession and wood yield, the identification of NDPEG losses (volumes left not harvested), the use of constraints to avoid preferred habitat falling below BNV in the Moose Zone only, the estimates of losses to accumulating reserves and roads were accurately described in the modelling.

The assumptions used in the analysis of management alternatives were appropriate and reflected the discussion in the 1996–1998 RPFO. The RPFO also provided detail on renewal and harvest activities. It reviewed the SFMM assumptions used, confirmed some, and suggested change to others. The Forest Unit (FU) definitions were, for the most part, considered appropriate. Timber yield estimates were refined based upon actual harvest volumes. Renewal success rates were considered appropriate. Areas lost to roads and landings, AOCs, and fires were reviewed and validated. Growth and yield estimates were reviewed based upon local field and science knowledge for use in the 2003 FMP. Likewise, AOC losses, roads losses and renewal success estimates were calibrated based upon past experience and actual performance.

The Analysis of Management Alternatives section of the FMP was very clear. The tables and text in the FMP identified the criterion and contrasted the four management alternatives to the Null alternative. The results of the analysis of the four management alternatives support the goal of sustainable forest management and the achievement of management objectives to slightly differing degrees. Brief and periodic underachievement of wildlife habitat and forest diversity objectives were identified, yet these situations (>20% below BNV) were evaluated as being not indicative of any long term continued trend and therefore, sustainable. The conclusion of the analysis was clear and transparent.

In general, the SFMM modelling was done very well and linked explicitly to the FMP objectives, strategies and targets. The analysis of management alternatives was clear, as was the demonstration and rationalization of the test for sustainability. The constraints in satisfying the wood supply targets were associated with the implementation of the woodland caribou/landscape strategies and would be difficult to mitigate as a result.

There was no evidence that the LCC reviewed the socioeconomic profile, SEIM inputs or model runs for the alternatives.

Recommendation 7: Red Lake Forest Management Company Ltd. and the Ministry of Natural Resources must ensure that required reviews of the socioeconomic modelling analysis is conducted by the Local Citizens Committee.

One strategy in the 2003-2008 FMP was to *ensure that adequate late winter moose habitat is available through temporal and spatial layout of harvest blocks.* However, it was unclear to the audit team how late winter habitat was considered during harvest block allocation since MNR has no NRVIS data on late winter moose habitat. The FMP does state elsewhere that the harvest allocation was analyzed to ensure that adequate late winter habitat would be available. This suggests that this was a modelling exercise.

Suggestion 8: Red Lake Forest Management Company Ltd. should ensure that strategies to meet moose habitat management objectives are clearly described in the forest management plan.

3.3.7 Operational Planning

AOC Planning

Within areas selected for forest management operations, identified values are afforded protection through the implementation of prescriptions that are applied to defined geographic areas surrounding or adjacent to the identified value. These prescriptions are documented in the FMP as AOCs.

AOC planning begins with the timely identification of values prior to planning. New values are entered into NRVIS, which MNR maintains. An up-to-date values map is then produced which is used to ensure that forest management activities are planned in such a way as to minimize the potential adverse impacts to these values.

AOC documentation in the 2003-2008 Red Lake FMP contained thorough discussions and current information on specific values. The FMP contained 42 separate AOC designations covering a diversity of values categories such as fisheries/water quality, cultural heritage, eagle and osprey nests, RSAs, and tertiary and secondary road water crossings. Prescriptions were consistent with the objective of protection of the identified values. Direction from guidelines was applied appropriately when available. Otherwise, a specific prescription was developed that adequately addressed protection of the particular value (e.g. timing restrictions for protection of tourism value). A trap cabin and trail, identified and protected during operations, was not added to the FMP through an amendment as required; however, all other values observed by the audit team were correctly captured in the AOC planning process.

For the 2003-2008 FMP, AOCs were plotted on operations maps for field purposes. For the 1998-2003 FMP the values information was not digital, therefore the AOC information was provided to operations by MNR as an attachment to each Cut Approval.

Silviculture

The Silvicultural Ground Rules (SGRs) describe the current forest condition, the ecosite type, future forest condition, silvicultural treatment package and regeneration standards. Often, more than one silvicultural treatment package is acceptable for a FU/site type combination. When this happens the preferred treatment package is identified and the remaining treatment packages for that SGR are ranked in order. There were eight preferred silvicultural treatment packages. It should be noted that RLFMCL changed the FU descriptions in the 2003-2008 FMP. Eight FUs were developed to represent unique stand and site conditions. By doing this, the FUs now separate specific ecosites such as Ecosite 12 (ES12) and lowland ES35 and ES36 and the purer forest conditions from the more variable mixedwood conditions. The experience of Company foresters and growth and yield data were used in the development of each SGR.

The total of 7,332 hectares proposed for renewal in the 2003-2008 FMP approximated the planned harvest depletion of 7,136 hectares. The difference was the area that RLFMCL was regenerating from the previous FMP. The forecast for tending was 1,683 hectares including ground and aerial spraying, even aged spacing, pre-commercial thinning and improvement which would achieve management objectives for the 2003-2008 FMP.

On-site inspections during and after logging operations allow RLFMCL staff to verify or alter silvicultural treatment packages according to the site conditions. Changes were documented in a Forest Operations Prescription (FOP), certified and attached to the AWS. In the 2003-2008 FMP, RLFMCL adopted the strategy of renewing the sites to acceptable species as soon as possible after depletion rather than waiting to see whether any natural in-growth of jack pine had occurred.

Full tree logging on shallow (less than 20 cm organic matter plus soil) ES12 sites in Northwestern Ontario, is not recommended in the Silvicultural Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Forest Ecosites in Ontario, Book II[18]. This practice was identified as an exception in both the 1998-2003 FMP and 2003-2008 FMP. The practice was designated as "Not Recommended" in the Guide because there is a lack of information to confirm whether or not the additional nutrient removal and soil disturbance associated with full tree harvesting would have a detrimental impact on long-term sustainability on these nutrient poor sites[19]. To allow forest companies to continue to use full tree harvesting equipment while gathering data, an approved monitoring program was established by a working group made up of forest industry, MNR stakeholders and the MNR Boreal Science section. RLFMCL is represented on that working group. Further discussion is contained in Sections 3.4.3 and 3.6.1.

Roads

Two secondary roads were planned for construction during the 2003-2008 FMP; the Owl Road and an extension to the Five Lakes Road. No new primary roads were planned. A rationale was provided as to why each road was required and two optional locations were considered for each, with an associated environmental analysis. Reasons given for the selected options were appropriate and considered the impacts on other forest values and users as well as costs.

Overall, the Red Lake Forest is well accessed by several main roads and future main road construction requirements should be minimal. As part of the planning process, a number of secondary roads were reclassified as primary roads to reflect their nearly permanent status. Road maintenance, including grading and snow ploughing, was planned accordingly to allow access for forestry operations. Planning included access controls (e.g. water crossing removals, signage) in some cases.

Harvest

Areas selected for operations reflected the selection criteria described in the FMP. The 2003-2008 FMP identified separate selection criteria for harvest, renewal, and tending. The audit team determined through document review and supporting interviews with RLFMCL staff that clear rationale was used in the development of the selection criteria. This was evident not only in the FMP but in the field as well. Throughout the field visit the connection between operational planning, FMP implementation, and desired outcomes was clearly evident.

Areas selected for harvest were consistent with the SMA. Minimum operability limits (age) were established in order to allow stands to reach the minimum operable age during the 20-year term of the FMP and ensure all eligible stands during the 20-year period were considered in the operational planning process. Contingency area was identified in the FMP and represented 26% of the five-year forecast of

[18] MNR. 1997. A Silvicultural Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Forest Ecosites in Ontario, Book II. Queen's Printer for Ontario. 370 pp.

[19] MNR. 2001. Full Tree Harvesting of Ecosites 11 and 12 in Northwestern Ontario: Monitoring Procedures and Best Management Practices. 17 pp. + Appendices.

harvest volume on the Forest. Contingency volumes were adequate to meet both softwood and hardwood requirements.

Forecast and Planned Depletion Areas were considered for all FUs. Natural depletions were considered as required in SFMM. The level of planned depletion area was sufficient for the Forest to meet its fibre supply and economic targets. The Red Lake SFL includes four wood supply commitments and FMP volume allocations were adequate to meet all fibre requirements.

The required Forecast of Revenues and Expenditures was completed as required, including supporting assumptions and rationale for the forecast expenditures and supporting rationale for the Crown charges. The forecast revenues and expenditures were adequate to meet planned renewal, maintenance and tending targets for the Forest.

3.3.8 Plan Review, Approval

The 2003-2008 Red Lake Forest FMP was developed and submitted on time and according to the schedule in the Terms of Reference. Times specified in the FMPM were provided for review of the FMP, preparation of the lists, public review and for the required alterations. The approved FMP contained all the appropriate certification and approvals. The required exception reference and the list of clearcuts that exceeded 260 hectares were complete. The FMP also included the Plan Contributors' page as required.

Required alterations were not reviewed by all intended reviewers as listed in the planning team Terms of Reference (TOR). However, those who did review the plan were also plan advisors and planning team members which resulted in an efficient review.

3.3.9 Plan Amendments

A total of 19 amendments were made during the audit term: 15 associated with the 1998-2003 FMP and four associated with the 2003-2008 FMP. All were categorized as administrative except for Amendment 4 of the 2003-2008 FMP which was categorized as a minor amendment. Amendments were related to the need for operational adjustments associated with modifications to AOCs, harvest area adjustments and changes to water crossing locations, and did not appear to be symptomatic of planning errors or significant information gaps.

All amendments initiated within the audit term were prepared by the FMP author. Only two of those amendments were properly certified by an R.P.F. Interviews indicated that the certification page was never completed nor requested by MNR as part of the amendment approval process.

Recommendation 8: Red Lake Forest Management Company Ltd. must ensure that all amendments are certified by a Registered Professional Forester.

The one minor amendment was initiated in November 2004 and therefore was to be addressed under the phase-in requirements of the 2004 FMPM. The amendment was prepared in consultation with interested and affected persons and organizations including trappers, the LCC and a lodge owner. Evidence was obtained that a public notice was published in the local newspaper on December 8, 2004, advertising a 15-day public review period. A mailing list was also kept on file. However, copies of individual notices were not available. There was no evidence to indicate that the public notice was placed in local publications in the Aboriginal media, as required. The 2004 FMPM has modified the requirements for the involvement of Aboriginal communities in forest management planning, including the provision of notice of plan amendments.

Recommendation 9: The Ministry of Natural Resources must ensure that amendment notices to Aboriginal communities meet the requirements of the Forest Management Planning Manual.

Both the 1998-2003 FMP and the 2003-2008 FMP contained a master list of all amendment requests and approved amendments. However, there was no documentation available to indicate that the amendments were distributed to the locations and within the timelines as identified in the FMP manual. Discussions with MNR staff indicated that amendments were sent to the MNR Northwest Region office only.

Recommendation 10: The Ministry of Natural Resources must ensure that all amendments are distributed to the required locations and within the required timelines.

The FMPM requires that the LCC be consulted on the categorization of amendments. The LCC, through a resolution, decided that they would be involved in all minor and major amendments and be informed of all administrative amendments that were considered. MNR was to provide a monthly report on administrative amendments to the LCC. However, there was no evidence of monthly reports on amendments to the LCC during audit period and, therefore, the audit team concluded that the LCC was not consulted on MNR's decision on the categorization of all amendments. In practice MNR has required the SFL holder, or has undertaken itself, to contact deemed appropriate stakeholders. However, the lack of communication to the LCC opens the potential for incomplete identification of public stakeholders.

Only the minor amendment under the 2003-2008 FMP was reviewed with the LCC. MNR issued a public notice on December 8, 2004. The LCC only had access to the documented amendment on December 6. There was no evidence that the LCC had adequate time to review the amendment before the public notice was issued.

Suggestion 9: The Ministry of Natural Resources, in cooperation with the Local Citizens Committee, should include a review of the Committee's role in the categorization of amendments to ensure that it is consistent with the requirements of the Forest Management Planning Manual and the desired level of involvement of the Committee, when reviewing and updating the Committee's Terms of Reference.

3.3.10 Contingency Plans

There were no contingency plans developed during the audit term.

3.3.11 Annual Work Schedules

The FOPs for harvest, renewal, and maintenance operations scheduled in the AWS were consistent with the SGRs and prepared in accordance with the FMPM.

Requests and documentation for revisions to FOPs and AWSs were included and consistent with the corresponding SGRs and FMP. Several stands were tracked from the SGRs in the FMP. The FOPs for these examples were completed and AWSs were approved before operations commenced.

3.4 Plan Implementation

3.4.1 Areas of Concern

Thirty-two AOCs were viewed during the field audit representing protection of fisheries, water quality, nests, tourism values, cultural heritage values, and woodland caribou habitat values. Most AOCs consisted of a no-cut reserve, ranging from 30 metres to 120 metres in width, being left in place to provide protection. Areas of Concern were appropriate to the protection of the identified values, with minor exceptions noted (e.g. wider reserve necessary based on actual site conditions), and reserves were found to be intact with no evidence of harvest trespass.

At Field Site 7, MNR had discovered a previously unidentified eagle nest in a large poplar tree during a routine inspection of a winter harvest block (Figure 6). According to subsequent reports, the block was harvested in January, 2003 by a contractor working on behalf of an Overlapping Licensee. The nest was occupied when discovered by MNR. The inspection report for the block, prepared by MNR, stated that the

Licensee became aware of the nest after cutting took place but had not reported the value, as required. MNR stated that they wanted to encourage the reporting of values and as such were reluctant to impose a penalty out of concern that it might discourage future reporting (the operator could simply fell the tree and destroy the nest). As well, there was no evidence of malicious intent.

Figure 6. Eagle's Nest Discovered During Harvest Operations.

An amendment to the FMP was processed to include a prescription and associated monitoring program for the nest. As part of the monitoring program, the contractor was required to check and report on nest activity, which was done. Because harvesting had occurred in both the primary and secondary zones prescribed as "no or minimal-disturbance zones" in the Bald Eagle Habitat Management Guidelines[20], this prescription was an exception to the Guideline. However, it was not identified as such. In addition, the results of the effectiveness of the prescription were required to be reported in the ARs; however, this was not done.

Recommendation 11: Red Lake Forest Management Company Ltd. must ensure that all exceptions to Guides that arise during forest management plan implementation are properly documented and effectiveness monitoring is reported.

As a result of this incident, additional compliance training was provided and a pre-work checklist procedure was implemented by RLFMCL in which staff review the operating conditions and responsibilities of operators on each block with the Overlapping Licensee.

3.4.2 Harvest

The field audit consisted of 26 field sites. Of these, 23 had a harvest component and nine were chosen specifically as harvest sites. Harvest operations were observed to be consistent with the FMP and AWS including the selection and eligibility criteria described in the FMP. Operations were laid out well, including roads and landings and season of harvest was found to be correct for all harvest blocks viewed.

The audit team did not observe any significant instances of rutting or soil disturbance. Harvest operations were well matched to the correct season of harvest as well as other operational considerations. MNR's Red Lake North Area Forest Compliance Infraction Spreadsheet did not document any infractions due to rutting and/or site disturbance. A review of a sample of Forest Operation Inspection Reports (FOIRs) showed no instances of non-compliance due to rutting. Field Site 9 was an example of a site with the potential for rutting given the late winter logging activity that had taken place. However, the decision was taken at the time to end felling and skidding operations during break-up on this site. It was the correct decision as there was potential for significant site disturbance if operations had continued.

Wood utilization met the requirements of the CFSA and the Scaling Manual[21], with one notable exception observed at Field Site 13 where the amount of slasher ends left on the landing was unacceptable (Figure 7). Stump heights, wood utilization at the stump (during the felling and skidding phases), and topping diameters were observed to be very good. MNR's infraction summary showed no infractions due to wasteful practices.

[20] MNR. 1987. Bald Eagle Habitat Management Guidelines. 12 pp. + Appendices.
[21] MNR. 2000. Scaling Manual. Queen's Printer for Canada. 79 pp. + Appendices.

The audit team was particularly impressed by the timeliness and the quality of slash pile burning.

Stand level snag requirements have evolved between the 1998-2003 FMP and the 2003-2008 FMP. Previous requirements associated with the pine marten guidelines[22] called for six dead or dying trees per hectare, with at least two being greater than 30 centimetres diameter at breast height. The Forest Management Guide for Natural Disturbance Pattern Emulation[23] calls for 25 well-spaced trees to be left per hectare, of which at least six must be large, live, high-quality potential cavity trees. Field observations during the audit indicated variability with respect to the amount and quality of snag trees compared to guideline requirements of the day. The focus of operations appears to be on leaving unmarketable trees (birch, larch and small diameter conifers, Figure 8). While operations can only work with the trees that are on site prior to harvest, the diversity of species typically present and the size of stumps remaining after harvest, as observed during the field audit, suggest that more effort is needed to meet the intent of the Guide, as discussed in the 2003-2008 FMP.

Figure 7. Slasher Ends Left on a Landing.

Recommendation 12: Red Lake Forest Management Company Ltd. must review snag requirements with Overlapping Licensees and monitor operations, to ensure that snag requirements are met.

3.4.3 Renewal

As part of the field audit, the audit team observed 22 field sites representing a variety of silvicultural treatments that were implemented on the Red Lake Forest during the audit period. These included even-aged natural regeneration after clearcut, planting, aerial seeding and seeding with site preparation, scarification for natural seeding, mechanical site preparation, prescribed burn, aerial and ground chemical tending, and pre-commercial thinning/spacing in jack pine. The renewal activities and SGRs were approved in the FMP. There was one exception to the SGRs to include full tree logging on ES12 sites. Renewal activities were approved in the AWS including the requirements for a prescribed burn. The renewal activities were consistent with the FOPs and were appropriate for the specific site conditions.

The 1998-2003 FMP identified 1,869 hectares to be clearcut for natural regeneration and 560 hectares were completed. This was partly due to greater tree planting efforts in the SbDee FU. In addition, the Sb2 FU and Pj2 FU were under-harvested during this term.

Artificial regeneration was only slightly lower (147 hectares) than planned for the 1998-2003 FMP. Site preparation was 1,711 hectares lower than planned for the same period due to the area not having been harvested. Site preparation operations were conducted to minimize site disturbance by taking soil and weather conditions into account. No compliance issues arose from site preparation activities. Power trenching is a standard method of site preparation on the Red Lake Forest and is working well. Examples of blading on budworm-killed balsam fir sites showed good results with planting afterwards (Figure 9).

[22] MNR. 1996. Forest Management Guidelines for the Provision of Marten Habitat. Queen's Printer for Ontario. 20 pp. + Appendices.

[23] MNR. 2002. Forest Management Guide for Natural Disturbance Pattern Emulation. Queen's Printer for Ontario. 24 pp. + Appendices.

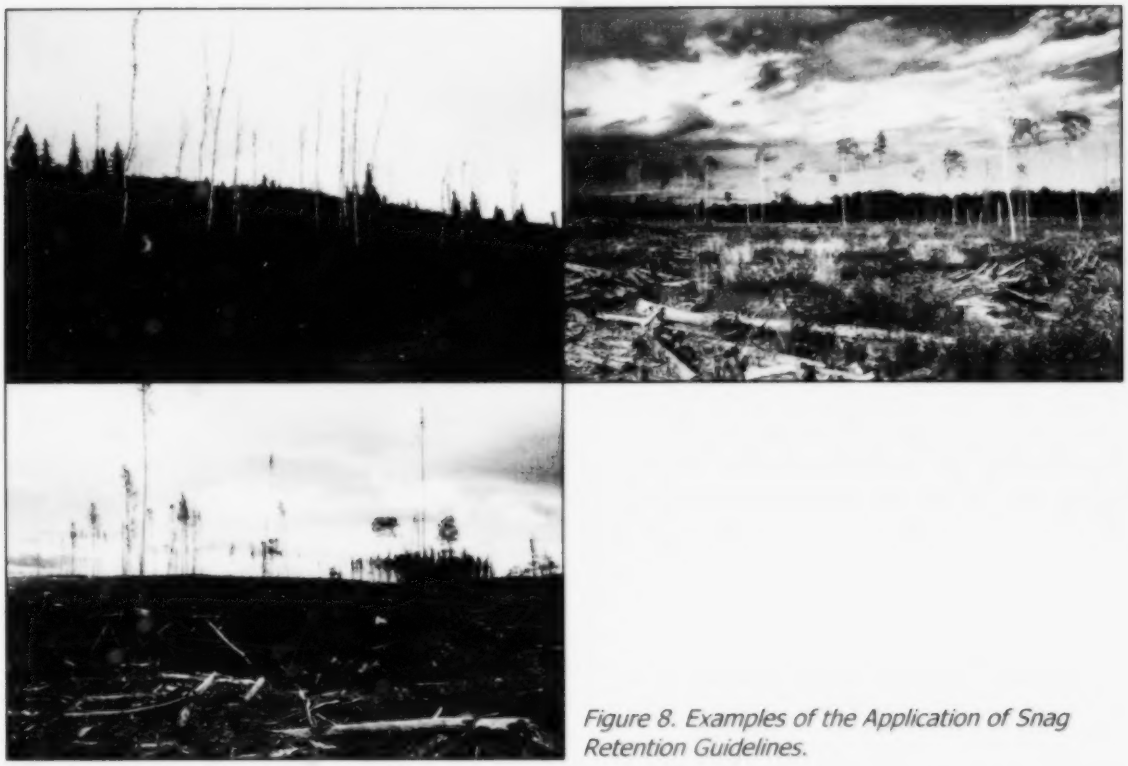


Figure 8. Examples of the Application of Snag Retention Guidelines.

One prescribed burn was carried out during the audit period. It proved to be successful and the planted black spruce and white spruce were growing very well. It was clear that this particular site presented ideal conditions. However, prescribed burns are logistically complex and require much more planning and coordination than conventional methods of mechanical site preparation. The likelihood of ideal weather conditions for burning is essentially unpredictable and can result in delays in implementation of follow-up renewal treatments. As such, the potential for large scale operational use of prescribed burns is limited (Figure 10).

Examples of natural regeneration, seeding, planting, aerial spray, ground spray and spacing were also viewed. Naturally regenerated sites are generally small and were usually in low, wet spruce sites. The artificially regenerated sites had excellent stocking and good growth. Major species that were artificially renewed included jack pine, black and white spruce and a small amount of red pine. RLFMCL had frozen stock rather than thawed trees delivered to the planting site in reefer vans. The trees were unloaded and thawed as needed. This method was working well and has contributed to excellent survival and growth. The use of mini plugs on shallow sites was showing good survival and growth. Jack pine stocking was particularly high with volunteer natural jack pine ingress which will require spacing in the future.

Figure 9. Planting of Spruce in Bladed Strips.

Figure 10. Little Vermillion Prescribed Burn.

According to the FMP, the Red Lake Forest is prone to significant natural disturbances, particularly wildfire, due to the influence of prairie weather systems. These frequent, often large scale disturbances tend to favour the perpetuation of pure conifer types, especially jack pine. Mixed conifer stands are normally found on deep, fine textures soils. The FMP notes that past logging practices (1930-1970), in which only the best conifer trees were harvested from areas of the Forest in close proximity to major waterways, has led to the promotion of mixed species conditions, and an increase in the hardwood component of these stands (Figure 11).

The audit team acknowledges that pure conifer types are likely the predominant stand condition and that past logging practices contributed to some of the current observed mixed cover stand conditions. The audit team believes that mixedwood conditions (predominantly mixed conifer stands) occur naturally on the Red Lake Forest and adjoining forests and represent a small but important component of these forests. The audit team also believes that the presence of mixed forest cover types at a natural level will not compromise woodland caribou habitat management efforts in the area, given that some mixedwood forest condition would exist on these forests naturally. While the natural proportion of mixedwood types on the Red Lake Forest may be relatively small compared to pure types, their ecological importance is magnified by virtue of their scarcity. Mixedwood forests types, their importance, management and perpetuation are described in the mixedwood silviculture guide[24] and in a series of notes[25] prepared by MNR.

Figure 11. Mixedwood Site at Field Site 4.

Modelling and the associated silviculture strategy in the 2003-2008 FMP has much of the current mixedwood forest condition being converted following harvest to predominantly single species conifer stand types. The source of future mixed forest types on the Red Lake Forest from harvested stands is through either renewal from a mixedwood stand directly to a mixedwood stand, or, in the majority of cases, through the failure of extensive treatments on PjDee and SbDee FUs. A portion of naturally disturbed areas is also modelled to return to mixedwood. The audit team is concerned that this

[24] OMNR. 2003. Silviculture guide to managing spruce, fir, birch, and aspen mixedwoods in Ontario's boreal forest. Version 1.0., Queen's Printer for Ontario. 286 pp. + Appendices.

[25] OMNR. 2005. Boreal Mixedwod Notes, Releases 1 and 2. Science and Technology Series, Vol. 9., Queen's Printer for Ontario.

essentially passive management approach for the long-term renewal of mixedwood FUs on the Red Lake Forest may not adequately acknowledge the ecological significance of the mixedwood component on the Forest and the need for an active renewal strategy that is fully described in the FMP.

Suggestion 10: Red Lake Forest Management Company Ltd. should review the mixedwood forest unit renewal strategies during preparation of the 2008-2018 Red Lake Forest Forest Management Plan and develop active management strategies that support the desired level of maintenance of mixedwood forest units.

During the field audit, the audit team viewed an ES12 site which had been full tree harvested during the winter of 2003-2004 and seeded with jack pine in the spring of 2005 (Figure 12). There was a significant amount of exposed rock and limited pockets of soil on the site. The audit team has two concerns:

1. Full tree logging is being applied at an operational scale on extremely shallow sites in the absence of conclusive information that long-term site productivity and ecological integrity of these sites is not compromised.
2. Harvesting is occurring on portions of ES12 sites that should be declared Protection Forest.

Figure 12. Example of Full Tree Logging on an ES12 Site.

It should be understood that logging is permissible on ES11 and ES12 sites, however full tree logging is a "Not Recommended" practice according to the Silvicultural Guide. Full tree logging is permitted on sites where total soil depth exceeds 20 cm provided that measures are used to minimize disturbance of the organic layer. Operational scale full tree harvesting on the extremely shallow portions of ES11 and ES12 is being conducted as an exception to the Silvicultural Guide, contingent upon the use of best management practices, and concurrently with a long-term (20 year) study funded by MNR and several forest companies. The purpose of the study is to collect scientific data to aid in the review of the recommendation status in the Silvicultural Guide for full tree logging on very shallow soil sites in Northwestern Ontario (Not Recommended vs. Conditionally Recommended).

A recent report[26] associated with the study was produced. The report stated that Ontario is the only jurisdiction in the world that is considering full tree harvesting on shallow sites and that the data to support a decision to change the "Not Recommended" to "Conditionally Recommended" status must be conclusive.

According to the same report, very preliminary data (pre-harvest and immediately post-harvest) suggests "that ecological stability can be maintained on ES11/12 ecosites even when the full tree logging method is employed, as long as timber extraction rotations exceed 80 years (a conservative estimate)."

This statement is followed by an important caution, as follows:

However, a critical aspect currently lacking in this evaluation is related to the dynamic nature of post-harvest stand recovery and the potential changes in the nutritional status of theses sites resulting from increased nutrient turnover and a high potential for off-site leaching. The quantification of these processes up to and including the period surrounding crown closure is necessary as they could result in

[26] Forest Ecosystem Science Co-operative Inc. Soil Quality Monitoring of Shallow Soil Ecosites in Northwestern Ontario: A comparison of full-tree and tree-length logging – a nutrient budget approach. Prepared by Dave M. Morris, Dan R. Duckert and Bryce A. Barker (CNFER). An internal report, March 30, 2005.

additional, and in some cases excessive nutrient loss, thereby greatly extending the replacement times. In addition, Best Management Practices for these ecosites should include silvicultural options that conserve/maintain the forest nutrient pool and those practices that ensure rapid re-colonization of these ecosites.

Following the site visit, and based on preliminary audit findings and discussions between the auditees and the audit team regarding full tree harvesting on very shallow sites, MNR Red Lake District conducted regeneration surveys on three full tree logged ES12 sites to provide additional data for consideration by the audit team. According to information provided by the District, the surveys were conducted on blocks from six to eight years post-harvest and focussed on portions of the blocks with the greatest amount of exposed bedrock. Results of the surveys indicated that minimum stocking levels were being met. The audit team finds the survey results encouraging; however they do not establish how these trees will perform in the future or if the ecological integrity of the sites will be restored and whether they will recover to their preharvest condition.

The Forest Information Manual[27] (FIM)describes the precautionary principle as it applies to the protection of forest values, and the audit team considers it pertinent to this discussion. The precautionary principle recognizes that some forest management activities can cause detrimental or irreparable damage. The rationale for its application is to reduce the risk of significant effects in the absence of conclusive information, and by using the best available information. The audit team questions whether allowing operational-scale full tree logging as an exception on ES11 and ES12 sites, in the absence of definitive results from the long-term study, is consistent with the precautionary principle. In this case it would seem that the exception has become standard practice in Northwestern Ontario.

To fully understand whether logging (full tree or other) is sustainable on extremely shallow sites will take time and further research. The studies to date admit to a lack of information to understand how these sites will respond in the future to harvesting. It is not known whether logging will have a detrimental impact on the long-term sustainability of these sites or whether extremely shallow sites will sustain further rotations. Best management practices aside, it would seem more consistent with the precautionary principle and science based decision-making in forestry to place limits on the operational application of full tree logging on these very shallow sites for the time being.

The ES11 or ES12 designation in the FRI typing of a forest stand raises a flag as to the sensitivity of that site and the potential presence of Protection Forest. Since FRI and ecosite designation is determined by photo interpretation and some additional information, actual on-site conditions need to be verified by the forest manager before operational decisions are made. This is a key step in the preparation of FOPs. Due to the uncertainty and lack of information regarding the recovery of the very shallow ES11 and ES12 sites, the audit team believes it prudent for MNR to review the approval of full tree harvesting on these sites with consideration for the need to place further conditions on any harvest approvals until definitive results from the long-term study are in.

Recommendation 13: The Ministry of Natural Resources Northwest Region must review the need to place additional conditions on the approval of full tree logging on ES11 and ES12 ecosites in Northwestern Ontario, including delineation of the extremely shallow and rocky portions of these sites and omitting them from harvest.

3.4.4 Tending and Protection

The tending and protection activities on the Red Lake Forest included ground and aerial herbicide spraying and spacing in jack pine. No protection (insect pest control) activities were planned or carried out. The tending activities were consistent with the FMP including the SGRs and the FOPs, and were approved in the AWS. Tending activities were also appropriate with the specific site conditions and consistent with information in the ARs.

[27] MNR. 2001. Forest Information Manual. Queen's Printer for Ontario. 320 pp. + Appendices.

Spacing was less than planned for the 1998-2003 term. RLFMCL, with funding assistance from Forestry Futures, started spacing programs in 2000 in the 1986 Pineridge burn and have continued with other spacing projects. RLFMCL achieved 747 hectares of spacing in three years of operations during 2000 to 2002 inclusive. In 2003, RLFMCL completed the planned target of 394 hectares of spacing and plans to complete 750 hectares by year three of the 2003-2008 FMP.

Between 1998 and 2003 actual aerial spray was 2,652 hectares less than planned. This was due to RLFMCL's practice of artificially regenerating sites within six months to one year after harvest operations were completed. This practice allows the seedlings to become established and start growing before the competition has an opportunity to overtop them. As a result, less aerial herbicide tending is required, which is very commendable. Tending costs were reduced as a result of this early stand establishment practice. Tending programs are generally set up every second to third year to complete larger areas at once. It was noted that the planned aerial tending for the 2003-2008 FMP was 809 hectares, significantly less than the area planned in the 1998-2003 FMP. The result of artificially regenerating sites before natural seedlings have a chance to be established may result in overstocked stands which will require future spacing.

3.4.5 Renewal Support

The renewal support activities, including tree improvement operations, seed collection and planting stock production, were consistent with the FMP, AWS and ARs.

RLFMCL is part of the Superior-Woods Tree Improvement Association and manages the first generation Beauregard black spruce seed orchard in partnership with Abitibi-Consolidated Inc. and Weyerhaeuser Company (Figure 13 and Figure 14). The orchard supplies all of the black spruce seed for the Red Lake Forest. RLFMCL has additional seed in the seed bank for all species so that the seeding program can be completed should there be a collection shortfall in the future.

Figure 13. Beauregard Seed Orchard.

Figure 14. Cone-laden Black Spruce at Beauregard Seed Orchard.

3.4.6 Access

Access operations, including recent road construction and the installation or removal of water crossings (culverts and bridges) were observed during the audit. The Five Lakes Road extension (Field Site 12) was constructed to provide access to the northwest corner of the Forest and potentially a large adjacent area to the immediate west. The adjacent area, known as the Valhalla Adjacent Area, is described in the

Terms of Reference for the Whitefeather Forest and adjacent areas land use strategy[28] as an area that would receive additional specific review as a potential source of replacement wood supply for proposed area removals from the Red Lake Forest to be added to Woodland Caribou Provincial Park. Much of the road passes through silty, fine-textured soils that pose significant erosion risk. The audit team observed an area in which the natural drainage pattern was altered and water had apparently collected along the right-of-way and ditches. To relieve this, operations had dug a large trench. In so doing, a considerable amount of soil was eroded and deposited into nearby standing timber. The audit team estimates that several tonnes of soil material were washed at least 100 metres from the original location (Figure 15 and Figure 16).

Other areas of soil movement were observed on the Five Lakes Road extension; one example was in the vicinity of a recent culvert installation.

Recommendation 14: Red Lake Forest Management Company Ltd. must implement road construction and maintenance practices that minimize disturbance of fine-textured soils.

Culvert installations viewed during the audit met requirements (e.g. approved size, minimal grubbing, free movement of water, stable slopes). Culverts ranged in size from 800 millimetres to 2,200 millimetres in diameter.

Road maintenance was observed across the Forest, both by helicopter and by road. At Field Site 1, MNR had issued a repair order to correct erosion of the surface of a tertiary road resulting from water flowing across the road because of a frozen culvert. The work was completed and coarse gravel was placed on the road in the area of the culvert. Re-vegetation had occurred around the culvert and there was no evidence of ongoing erosion (Figure 17).

Several water crossing removals, including a portable bridge, had also taken place (Figure 18). All but one were observed to have been properly completed with attention to minimizing the potential for erosion into the stream bed. At one location two erosion channels led downslope from the road directly into the stream with no apparent attempt to control this situation.

Figure 15. Soil Erosion in Right of Way at Field Site 12.

Figure 16. Soil Erosion into Standing Timber at Field Site 12.

3.5 System Support

3.5.1 Human Resources

Proper communication, awareness of duties and responsibilities, and training of staff, employees and contractors is necessary in order to successfully manage the forest. The audit team assessed these aspects after reviewing procedures and records, and interviewing MNR and RLFCML staff.

[28] Pikangikum First Nation and OMNR. 2003. Whitefeather Forest and Adjacent Areas Community-based Land Use Strategy Terms of Reference. 32 pp.

The communication lines between RLFMCL and the Overlapping Licensees were effective, the principle method being direct discussions. The training program implemented by RLFMCL was comprehensive. Regular spring training sessions were held and covered a diverse array of topics (e.g. NDPEG implementation, culvert installation and compliance reporting). Records indicated excellent attendance by Overlapping Licensees. Employees of Overlapping Licensees were required to attend specific training sessions (e.g. fire fighting). RLFMCL indicated frustration with the difficulty in getting Overlapping Licensees to spend one day in the office for training. These are relatively small operators who cannot afford too much downtime and often remain in the same block/area for months at a time if not the complete AWS period. Training was therefore usually condensed into one day per year, every spring. The pre-work checklist also ensured that Overlapping Licensees review specific responsibilities.

MNR staff attended formal District information meetings every six weeks. Informal meetings were held, at a minimum, on a weekly basis amongst the staff directly responsible for the Red Lake Forest.

MNR provided access to a suite of training opportunities to employees as required. Interviews indicated that employees were aware of their responsibilities and had access to appropriate training opportunities. Training needs of each employee were assessed at annual performance reviews and records were maintained in individual employee files.

Figure 17. Road Repair Work as Result of Repair Order.

Figure 18. Stream after Removal of a Portable Bridge.

3.5.2 Documentation and Quality Control

The preparation, distribution, collection and maintenance of forest management documents and records was well done by RLFMCL. Records were up-to-date. Files and binders of information were organized and easily retrieved. All digital information was archived and kept off-site. Back-up systems were in place for RLFMCL computers. There were copies of all GIS information held by QSP Geographics Inc. in Toronto, who also have a backup system. BDO Dunwoody LLP prepared the year-end financial record and the financial records were stored off-site. The audit team had access to all audit information.

MNR documents were generally found to be organized and easily accessible to the audit team. The preparation, distribution, collection and maintenance of forest management documents and records was well done. The current version of required information was readily available when requested by the audit team. In general, the records and documents were kept up to date. The AWS public notices on file were intermittent over the audit term and Recommendation 4 in Section 3.2.4 addresses this issue. The file maintaining records to demonstrate that patented mining claim holders were notified of potential activities each year was found to be incomplete (i.e. missing documentation). This is further discussed in Section 3.8 and results in Recommendation 18.

3.6 Monitoring

3.6.1 General Monitoring

Compliance monitoring of forestry activities is a joint responsibility of the forest industry and MNR. While both parties are responsible for compliance, SFL holders have the lead role in forest compliance planning, conducting inspections, the identification of compliance and non-compliance, reporting to MNR, performance of corrective measures and future preventative measures to ensure improvement, as well as training and education in all areas of forest compliance. Section 3.8 contains additional information on RLFMCL's compliance program.

The role of MNR is focused on the regulatory aspects of forest management including monitoring, auditing of industry compliance inspections, assessing non-compliance significance, and determining corrective and enforcement action. MNR District Compliance Plan and Annual Compliance Operations Plans were completed as required. Annual Compliance Operation Plans prepared and implemented by MNR outlined compliance issues, areas of focus for the upcoming year, roles and responsibilities and compliance monitoring targets.

MNR had also taken the additional step in developing a "Penalty Assessment Criteria" in order to improve penalty assessment decision-making and consistency in the administration of monitoring and compliance activities on the Forest. This criteria has become a useful and positive tool for MNR staff in the Red Lake District as it clearly outlines a decision tree for staff to follow in determining the level of a penalty or if one needs to be assessed at all. This in turn allows MNR to effectively communicate its decision-making process to the SFL holder and other parties involved in compliance monitoring and penalty assessment on the Forest.

Table 2 summarizes RLFMCL and MNR compliance inspections for four years of the audit period. A total of 528 Forest Operations Inspections were completed for the first four years of the audit period. The monitoring program was in accordance with the approved FMP and AWSs. A review of FOIRs, compliance infraction summaries, as well as observations made during the field audit, demonstrated consistency with respect to compliance issues on the Forest, the transparent tracking and assessing of compliance infractions, and generally good communication between the SFL holder and MNR on compliance issues.

Table 2. Summary of Forest Operations Inspections for the Red Lake Forest (2000-2004[a]).

	RLFMCL Inspections	MNR Inspections	RLFMCL % of FOIRS In-Compliance	MNR % of FOIRS In-Compliance
Access	84	38	93	71
Harvest	200	120	92	78
Renewal	77	6	97	83
Maintenance	2	1	100	100
Protection	0	0	0	0
Total	363	165		

[a] Annual Report for final year of the FMP was not due until November 15, 2005, and therefore not available for review at the time of the audit.
Source: Annual Report Tables AR-12.1 and AR-12.2.

Under the previous forest compliance information system, known as FOCIS, there was duplication of reporting of non-compliances between the SFL and MNR. This would account for some of the discrepancy in overall reported in-compliance levels between MNR and RLFMCL during the audit term. Over the audit period, eight MNR inspections resulted in findings of non-compliance that were deemed to be significant. Information provided by MNR at the time of the field audit indicated that there were no

outstanding infraction penalties. The ARs included a discussion of compliance and monitoring issues and trends or opportunities for improvement.

Over the term of the audit there was not a particular area that posed compliance problems or indicated repeat offenders. Given the evolution of compliance monitoring responsibilities, inspector certification and reporting requirements, it will be important to note and address issues that may arise in the early years of the 2003-2008 FMP period.

Three hundred and twenty harvest FOIRs were conducted on the Forest during the audit period (RLFMCL and MNR combined). Nine compliance infractions resulted in penalties being assessed in four instances. The spring of 2003 was the last date of a harvest compliance infraction and improvement is being shown. MNR expressed a concern regarding compliance issues resulting from poor "care and control" being exercised by an Overlapping Licensee on the Forest. The care and control issue would best be described as the result of the challenges that contractors and supervisors have in balancing priorities and day-to-day operational issues across their various businesses and operations. The result can be, for example, errors in boundary marking and trespasses during harvest operations. This is a legitimate concern that is shared by RLFMCL. It is not unusual to see such issues during the transition from a Crown Unit to an SFL and overall, RLFMCL is performing well.

From 2000 to 2004 there were two instances of non-compliance associated with renewal and maintenance activities. This occurred in 2000-2001 and was out of 30 inspection reports over 400 hectares of renewal reported. In 1999-2000 there was one minor non-compliance for renewal reported by MNR which was resolved. There were no other instances of non-compliance during the 1999 to 2004 period. From 1999 to 2004 tending operations were in compliance with approved operations. The compliance plan was followed and plans to monitor compliance were effective.

Since July, 2005 all persons conducting forest operations inspections must be certified forest operations compliance inspectors. Achieving this designation has proven to be a challenge for Class B Shareholders. It is the responsibility of the SFL holder to ensure compliance monitoring and reporting is in accordance with FIM and related documents. To date, qualified staff from RLFMCL have conducted the inspections and submitted the associated compliance reports. According to RLFMCL, Class B Shareholders not qualified to conduct inspections will contract out the inspections to a certified forest operations inspector to carry out this work.

RLFMCL visually inspected treated sites to evaluate whether the effectiveness of the respective renewal treatment was satisfactory. If the silvicultural results were in question, further renewal treatment was prescribed.

FTG surveys were undertaken of harvested and naturally depleted areas in the summer of 2005 in accordance with the Silviculture Effectiveness Monitoring Manual for Ontario[29]. During that summer 9,537 hectares were surveyed for FTG. Of this area, 7,671 hectares were treated (planted, seeded, sprayed and/or thinned) by MNR between 1988 and 1998 and 1,866 hectares were areas that were harvested and planted or seeded by RLFMCL from 1999 to 2000.

Extensive surveys for height only were also carried out in the summer of 2005 on 1,484 hectares of regeneration originating between 1984-1987 which was not FTG surveyed, as well as 1,784 hectares of thinning blocks completed in 1999-2004. Extensive surveys for height measurements were also done on all areas where FTG surveys were completed from 1998-1999 which were less than three metres in height. Where the original survey did not meet the FTG standards at the time and was classified as B&S, new stocking, species composition and height were also recorded. The information from the FTG and extensive surveys will be submitted to QSP Geographics Inc. in Toronto who are contracted to update the FRI in digital format and produce forest stand maps for RLFMCL. The updated FRI will be used in the preparation of the 2008-2018 FMP.

[29] MNR. 2001. Silvicultural Effectiveness Monitoring Manual for Ontario. Queen's Printer for Ontario. 26 pp. + Appendices.

The overall monitoring program on the Red Lake Forest was in accordance with the FMP and appropriate to measure the effectiveness of the silvicultural treatments. The monitoring program included a description of the monitoring methods used to determine the effectiveness of silvicultural treatments which were exceptions to the silvicultural guides.

The only exception was full tree harvesting on shallow sites (ES11 and ES12 sites). RLFMCL is a participant in the Provincial full tree harvest monitoring program. This program consists of two series of permanent sample plots. There are 100 permanent sample plots in total with eight Level I plots and the rest Level II plots. The Level I plots involve intensive monitoring while Level II plots were established across the region to address the variation of ES11 and ES12 sites and to confirm that the results from the Level I case studies are consistent with the range of normal operations. Level II plots are sampled less intensively and implemented by each participating SFL holder. RLFMCL has three Level II permanent sample plots which they monitor on the Red Lake Forest. The Provincial full tree harvest monitoring program requires approximately 20 years to complete.

In addition, operations on all other ES11 or ES12 areas must be conducted under the Best Management Practices[30] for ES11 and ES12 shallow soil sites. The only requirement for monitoring these sites is that FTG assessments be conducted, and that the sites be identified in the AWSs and ARs as ES12 exceptions.

3.6.2 Annual Report

Annual Reports were available for four of the five years of the audit term (i.e. 2000-2001 to 2003-2004). Annual Reports were well written with a good discussion of operations, challenges and trends during the year. MNR also provided a summary of their compliance activities. In two of the four years RLFMCL requested an extension to the submission date for the AR, although MNR reinforced the need to submit the reports on schedule. It was noted that MNR took one month longer than the allowable time to review and respond to the April 15, 2003, AR submission from RLFMCL. Both RLFMCL and MNR need to take note of the timing requirements for the submission and response time for ARs in FIM.

Suggestion 11: Red Lake Forest Management Company Ltd. and the Ministry of Natural Resources should review information flow timing requirements regarding Annual Reports.

MNR Red Lake District's Term and Condition 77 reports (now Condition 34 of the Class Environmental Assessment (EA) Declaration Order[31]) were available for the first four years of the audit term; the fifth year report was not due at time of audit. The reports provided a summary of activities and discussions associated with negotiations with Aboriginal communities regarding more equal participation by Aboriginal people in the benefits from forest management planning. No documentation of negotiations with First Nations was available other than through the Whitefeather Initiative.

The reports were not included within the ARs for the same period, as required. It was not clear when the reports were actually prepared and reviewed within MNR. However, MNR did not produce the reports in a timely fashion for inclusion in the ARs. Beginning in 2004-2005, the report is to be incorporated into the Provincial Annual Report on Forest Management, but must still be compiled and provided by each MNR District.

Recommendation 15: The Ministry of Natural Resources must ensure that Condition 34 reporting requirements are met, as required by the Environmental Assessment Declaration Order.

[30] MNR. 2001. Full Tree Harvesting of Ecosites 11 and 12 in Northwestern Ontario: Monitoring Procedures and Best Management Practices. 17 pp. + Appendices.

[31] Ministry of the Environment. 2003. Declaration Order regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario. 48 pp.

3.6.3 Report of Past Forest Operations

The RPFO and associated RPFO summaries were reviewed for both the 1991-1996 and 1996-1998 periods. Both RPFOs were prepared by MNR. Documentation of submission dates for the RPFOs was not available. According to MNR the 1996-1998 RPFO was submitted in the summer of 2000.

Required subject areas were discussed within the RPFOs (e.g. depletions, wood utilization, renewal and tending, achievement of management objectives, review of assumptions) and differences between planned and actual activities were adequately discussed. For example, both reports included a brief discussion of wood utilization during the periods and the impact of circumstances on the achievement (or underachievement) of wood supply targets. The RPFO provided a factual assessment of the wood supply situation but there was little discussion of emerging trends and issues that would assist future forest managers on the Red Lake Forest. A discussion of emerging trends and circumstances and their impact on the future achievement of wood supply commitments, as well as suggested mitigating actions, could be valuable for future forest managers to consider.

Management assumptions were reviewed to the extent possible given the planning requirements of the day and it was evident that appropriate changes were incorporated into planning for the 2003-2008 FMP.

Neither RPFO contained Table RPFO-9 (Summary Report of Harvest and Regeneration Success). The 1996-1998 RPFO stated that no FTG surveys were carried out during that period. There was, therefore, no discussion regarding the success of silvicultural treatments or accuracy of predictions of future FUs. The RPFO stated that staff were committed to the production of the 1998-2003 FMP during 1996-1997, preventing assessments from being completed. However, from 1998-2000, after the work of planning for the 1998-2003 FMP was completed, approximately 15,000 hectares were surveyed and approximately 10,500 hectares were classified as FTG.

The 1991-1996 RPFO stated that Provincial funding for silviculture was "restrained" prior to 1995, requiring forest managers to adopt lower cost treatment methods (e.g. seeding and natural regeneration) to meet silviculture targets. No specific problems were noted as a result of the shift to lower cost treatment methods. The silviculture program was funded through a special purposes account during 1996-1998. Funding was more than sufficient to support the renewal program and a surplus was developed in the special purpose account. During this time SFL negotiations were taking place and it was decided to continue developing a surplus. It was anticipated that upon signing the SFL the stumpage renewal rate would be reduced to more accurately reflect the appropriate silvicultural funding.

A list and discussion of amendments associated with the 1996-1998 Contingency Plan was provided. All the amendments were categorized as administrative and were associated with minor changes to planned operations (e.g. new value identified, road realignment, addition of minor amounts of harvest area). The audit team considers the categorization of the amendments appropriate.

The preliminary draft 1998-2003 RPFO was not submitted by RLFMCL to MNR within the time frame required by the FMPM (i.e. within two years of the expiry date of the 1998-2003 FMP). A version of the text was available in August, 2005 and the associated tables were produced in October, after the field audit was completed. RPFOs associated with 1998-2003 FMPs were the first to follow the full reporting requirements of the 1996 FMPM. For persons preparing the RPFOs there was some uncertainty as to how certain tables were to be completed. The audit team viewed correspondence from MNR dated August, 2005 that provided guidance on the completion of RPFO Tables 13 through 19. The audit team subsequently received a complete RPFO dated November 1, 2005.

The RPFO was based on data contained in the associated ARs, documents reviewed by the audit team. The text of the RPFO provided a summary of actual achievements compared to the levels of planned activities. The discussion was consistent with information contained in the Comparison and Trend Analysis of Planned versus Actual Forest Operations Report (TAR) (Section 3.7.3). The tables in the RPFO were completed to the extent possible. The information in certain tables (i.e. RPFO Tables 13 – 19) will become much more meaningful once several plan terms of data are captured since trends in the

data will then become evident. Based on the information currently available, limited as some of it may be, most of the variables are moving in the desired direction or are consistent with the predicted/desired levels.

The RPFO discussion included references to issues or strategies that were addressed during preparation of the 2003-2008 FMP (e.g. objectives to de-fragment the Forest) or will be considered for the 2008-2018 FMP (e.g. review of the practice of planting red pine).

3.7 Achievement of Management Objectives and Forest Sustainability

3.7.1 Achievement of Management Objectives

Management objectives are developed for all Crown forests and, as such, must be consistent with the primary goal of forest management on Crown lands. The goal is to achieve a healthy, sustainable forest ecosystem and derive the associated environmental, social and economic benefits. At the individual forest level, management objectives are the desired outcomes of forest management planning achieved through the management of forest cover. The assessment of the achievement of management objectives is, therefore, a critical part of the review of the success of forest management. It also plays an important role in the process of adaptive forest management by allowing adjustments in objectives, targets and strategies over time to reflect successes, failures and the inclusion of new information and approaches to forest management.

The IFAPP requires the audit team to review and comment on the RPFO author's assessment of the achievement of management objectives contained in the most recent complete RPFO. In the case of the Red Lake Forest that is the 1996-1998 RPFO. The RPFO reported on operations associated with the 1996-1998 Contingency Plan. The Contingency Plan, prepared by MNR, was developed to re-align future five-year planning terms with regional forest management planning workloads and to capture a large number of planned allocations from the previous 1991-1996 Timber Management Plan (TMP) that were not harvested because of a shift in operations to salvage harvest areas.

A summary of the objectives, the RPFO author's assessment of their achievement, and the audit team's comments on that assessment are presented in Table 3. The audit team's review of the RPFO author's assessment of the achievement of the management objectives included the comments contained in the 2000 IFA Report and the tables and text contained in the 1996-1998 RPFO. No field sites were viewed to confirm whether or not objectives were met because these years fall outside of the audit period and were assessed as part of the 1995-2000 IFA. However, some sites operated prior to 2000 were viewed to confirm FTG status.

Table 3. Review of the Assessment of Achievement of Management Objectives in the 1996-1998 RPFO.

Objective	RPFO Author's Assessment or Recommendation	Audit Team Comments
Timber Production		
Ensure 404,000 m^3 of conifer and 14,000 m^3 of hardwood is made available.	• Planned volumes available: 92% of conifer utilized; 14% of hardwood utilized. • 50% of access target achieved. • Stumpage revenues lower due to lower market stumpage rates.	Planned volumes in Contingency Plan differ slightly from planned volumes reported in RPFO; rationale for shortfall in hardwood was reasonable (i.e. hardwood mill not constructed).
Long Term Sustainable Yield		
Implement an economically efficient silviculture program and maintain a sustained supply of timber products.	Tree planting target exceeded. Other targets not met (e.g. significantly less aerial seeding, scarification and site preparation conducted - size of harvest program in late 1997 prevented completion during planning term).	Reasonable rationale provided for shortfalls.

Table 3 continued.

Objective	RPFO Author's Assessment or Recommendation	Audit Team Comments
Environmental		
Implement timber management activities using established environmental practices to minimize impacts and enhance environmental quality.	All achieved except establishment of lichen regeneration plots.	

The audit team also reviewed progress toward the achievement of the management objectives set in the 1998-2003 Red Lake Forest FMP. A summary of that assessment is presented in Table 4. Where, in the opinion of the audit team, an objective was either partially met or not met, a corresponding comment, Recommendation or Suggestion is shown.

Table 4. Review of the Achievement of Management Objectives from the 1998-2003 Red Lake Forest FMP.

Objective	Audit Team Assessment of Progress Toward Achievement	Comment, Recommendation or Suggestion
Timber Production		
Ensure availability of 838,000 m^3 conifer and 66,400 m^3 hardwood.	Met	
Maintain productive forest at 173,401 hectares.	Met	
Meet needs of traditional users of timber resources.	Met	
Meet Ministerial timber supply commitments.	Met	Hardwood fibre to Columbia Forest Products not required because mill was not built.
Long Term Sustained Yield		
Implement economically efficient silvicultural program to minimize changes to current biodiversity.	Partially Met Thinned area accomplished was approximately 1/3 of planned area; Note: unplanned thinning in naturally depleted areas totalled 416 hectares.	Thinning will be completed during the 2003-2008 FMP period.
Environmental		
Provide for sustainability of forest while minimizing impacts on plant and animal life, water, soil, air and social and economic values.	Environmental aspects met. Social aspect Partially Met; irregular involvement of LCC on planning team.	 Recommendation 1; Suggestion 3 and Suggestion 4

Note: Objectives are paraphrased in the interest of space.

The audit team also reviewed progress towards the objectives contained in the 2003-2008 Red Lake FMP (Table 5). However, this review relies to an extent on less than two years of reporting information and, therefore, may not reflect the full five years of achievement once completed. The planning team for the 2003-2008 Red Lake FMP chose to combine the objectives associated with the provision of forest cover for values dependent on forest cover and the silviculture objective into either the forest diversity objective or the silviculture objective.

Two areas, totaling approximately 16,000 hectares, received interim protection through the Ontario Living Legacy process as potential additions to Woodland Caribou Provincial Park. The intent is to add them to the Park once replacement wood supplies are secured from other locations. The areas currently remain

within the Red Lake Forest productive forest landbase and were modelled as such, however no allocations were permitted.

Table 5. Review of the Progress Towards Achievement of Management Objectives from the 2003-2008 Red Lake Forest FMP.

Objective	Audit Team Assessment of Progress Toward Achievement	Comment, Recommendation or Suggestion
Forest Diversity (incorporates Provision of Forest Cover Objectives and Silviculture Objective)		
Maintain long-term age class structure and protect sites from environmental degradation.	Age class structure occasionally falls below minimum Bounds of Natural Variation in some age classes.	Constraints related to age and composition of Forest limit options; all management alternatives had similar age class problems.
Maintain long-term continuous supply of older forest.	Long-term target set at 3% of all forest units in old growth conditions.	
Ensure forest management activities cause movement towards a more natural landscape pattern.	Frequency, distribution and configuration of disturbances patches supports objective.	
Maintain forest function for long-term wildlife habitat.	Some marten cores and woodland caribou blocks are smaller than desired. Amount of preferred habitat falls below minimum Bounds of Natural Variation for four selected species in a small percentage of terms. Snag tree retention requires improvement.	Constraints related to age and composition of Forest limit options; all management alternatives had similar shortfalls. Recommendation 12
Maintain water quality and protect fisheries.	Water crossings properly installed, maintained with minor exceptions; AOCs on waterbodies implemented.	
Socio-Economic (incorporates Silviculture Objective)		
Provide a predictable, continuous supply of wood products.	Conifer supply falls below target in four of nine terms.	Constraints related to age and composition of Forest limit options; all management alternatives had similar projected conifer shortfalls.
Make incidental volumes of timber available to local users.	Fuel wood is available through permits issued by MNR.	
Work with Aboriginal peoples to identify and implement ways to maintain/enhance social and economic benefits to Aboriginal peoples.	RLFMCL and MNR made efforts to involve First Nations communities; formal offer of silviculture and training opportunities not taken up by Pikangikum First Nation; some employment on Red Lake Forest; Whitefeather initiative supports Pikangikum First Nation's interests.	
Protect values associated with tourism and other commercial uses.	Specific AOC prescriptions developed in consultation with tourist operators.	
Provide road-based access, land use and recreational opportunities through road maintenance and development to harvest areas within FMP term.	Most roads are open to the public; some restrictions apply for the protection of commercial tourism operations and other forest values.	

Table 5 continued.

Objective	Audit Team Assessment of Progress Toward Achievement	Comment, Recommendation or Suggestion
Protect private land, parks and other land ownerships/values from encroachment by planned activities.	Harvest block boundaries marked and respected.	
Protect archaeological/cultural heritage sites from deterioration.	Area of Concern prescriptions prepared and properly implemented.	

Note: Objectives were paraphrased in the interest of space.

Areas north of the Red Lake Forest, known as the Whitefeather Forest and adjacent areas, may eventually provide the replacement wood supplies; however there are significant planning and consultation requirements that must first be met since these areas are outside of the area approved for forest management in the Province (north of the Area of the Undertaking). At the time of preparation of the audit report a draft Community-based Land Use Strategy for the Whitefeather Forest and adjacent planning areas was available for public review; with public inspection of the approved strategy anticipated by mid-2006. The draft Strategy identified commercial forestry as an acceptable land use within portions of the planning area. Next steps include regulation of parks, environmental assessment deliberations, designation of SFL boundaries, business planning, and forest management planning. MNR expects this process to take from five to ten years to complete.

The OLL direction states that the proposed Park additions will only occur once replacement wood supplies are identified. MNR also stated that the harvest deferrals have no short term impact on wood supply on the Red Lake Forest because of the generally young age of the timber within them. Replacement wood supplies that could be operated in the short term offer the opportunity to address some of the projected conifer wood supply shortfalls identified in this audit as an HPA and as an issue in the previous IFA. The timely delivery by MNR on their commitment to identify replacement wood supplies would assist in addressing this problem. This could entail commitment to an interim economical supply until final resolution of the replacement wood supply issue is reached.

Recommendation 16: The Ministry of Natural Resources must take timely action to fulfill their commitment to Red Lake Forest Management Company Ltd. to identify replacement wood supplies for the proposed Ontario's Living Legacy additions.

Recommendation 7 from the 2000 IFA directed RLFMCL and MNR to investigate ways of adding new wood supply to the Forest to compensate for projected shortfalls. Exclusion of harvest from the patent lands on the Forest to which the Crown has timber rights was cited as one of the reasons for the forecast decline. Timber on the patent lands was a traditional source of fibre to local operators; however, discussions between RLFMCL and MNR have not resulted in an agreement that would again allow access to this timber. MNR had requested that RLFMCL prepare a management plan for the patent lands before permission was granted to harvest this area but RLFMCL was not prepared to do this. Regulation 167/95 of the CFSA permits MNR to grant a licence to harvest trees reserved to the Crown subject to any terms and conditions specified in the licence. Therefore, in the case of harvest on patent lands on the Red Lake Forest, MNR is fully within their rights to apply conditions; it is the extent of the conditions proposed by MNR that has become an obstacle to reaching an agreement. While this issue was identified as a HPA during audit planning, RLFMCL does not appear interested in pursuing further discussions at this time, given the conditions being required by MNR. Both parties acknowledged that individual operators can apply to harvest timber on the patent lands on their own.

3.7.2 Review of RPFO Assessment of Sustainability

The assessment of forest sustainability is produced through an examination of measurable indicators associated with a set of forest sustainability criteria (see Section 3.7.4 below, for further discussion) and an analysis of changes to both the forest condition and the socioeconomic condition.

Both the 1991-1996 RPFO and the 1996-1998 RPFO contained an assessment of forest sustainability. The 1991-1996 Red Lake Forest TMP was prepared under the Timber Management Planning Manual (TMPM)[32] requirements, and, as such, did not include a suite of indicators against which to assess forest sustainability. The 1996-1998 Contingency Plan was prepared using the phase-in requirements of the 1996 FMPM. Given these limitations, the RPFO authors provided a qualitative assessment that the audit team considers appropriate in the circumstances.

Both RPFOs concluded that forest sustainability was being achieved on the Red Lake Forest. This was based on a number of general assessment categories such as forest landscape structure, wildlife diversity and habitat, renewal and tending activities, forest access and benefits to society (Figure 19). The conclusions were consistent with the results in the TAR with respect to changes in forest landbase and forest composition and structure. They also accurately reflected the various forest management activities that took place during the FMP terms. Additional discussion was provided on the positive benefits to the area economy from forestry operations and the opportunities for and involvement in forest management planning by the public, First Nations and forest stakeholders.

The 1998-2003 RPFO discussed forest sustainability in the context of the indicators associated with Tables RPFO-15 to RPFO-19. It was concluded that overall the indicators were achieved, although more time is required to establish clear trends in the data.

Figure 19. Wildlife Tracks at Field Site 5.

3.7.3 Review of the Comparison and Trend Analysis of Planned versus Actual Forest Operations

The TAR is a document prepared by the auditee, in this case RLFMCL, to provide an overview of changes in the forest landbase and a comparison of planned and actual forest operations over several planning terms.

The TAR for the Red Lake Forest covered the period from April 1, 1991 to March 31, 2004. The report spans four separate forest management plans including the 1996-1998 Contingency Plan and the first year of the FMP currently in effect, for a total of 13 years. The assessment of trends is complicated by the fact that the landbase has changed significantly over this time. As noted by the TAR author, patent lands were included in the landbase prior to the 2003-2008 FMP. Other factors such as landbase withdrawals and changes in the map base also complicate the assessment.

Total forested landbase declined by 2.7% and productive forest landbase by 5.4%. There were some changes in the proportion of working groups. Jack pine increased from 28% to 43% and poplar increased from 3.2% to 9.2% of the production forest; both increases being a likely reflection of naturally disturbed areas (fire, blowdown, spruce budworm) returning principally to these species. Jack pine working group replaced spruce working group as the most abundant working group on the Forest. Spruce working group remained constant at 39% of the total production forest area. This shift is consistent with the recent disturbance history of the Forest.

There was some evolution in the description of FUs, in an attempt to better capture ecological and silvicultural relations. The FUs in the 1991-1996 FMP represented three types of conifer (jack pine, spruce and balsam fir) and one grouping for hardwood. Under the current FMP a somewhat more diverse array of FUs was created. Two mixedwood FUs were created (conifer and hardwood) with

[32] MNR. 1986. Timber Management Planning Manual for Crown Lands in Ontario. Queen's Printer for Ontario. 164 pp. + Appendices.

balsam fir being captured within the conifer-mixedwood FU. A red pine FU was also created to reflect recent efforts to increase sawlog production through the planting of red pine.

Table 6 presents trends in the utilization of harvest area and harvest volumes. These variables are typically linked since the amount of area harvested directly affects the amount of volume derived. Overall use of the available harvest area varied significantly. A number of factors can account for this, but it is typically market driven. As the TAR author points out, wood from the Red Lake Forest tends to be higher cost because of haul distance to mills. As well, some operators chose to work at other, better paying activities when prices and demand for wood were lower. Actual conifer volumes were close to planned, but hardwood volumes did not meet planned volumes in any term; this being a function of limited markets for hardwood fibre. Planned harvest volumes were underestimated in most terms, this being most evident in the 1996-1998 term where 90% of the planned volume was realized from 60% of the planned harvest area. Harvest yields should be more in line with harvest area in future years because yield curves were adjusted in the 2003-2008 FMP to better reflect actual yields.

Table 6. Actual versus Planned Harvest Areas and Harvest Volumes (%).

	1991-1996	1996-1998	1998-2003	2003-2008*
Conifer (area)	89	60	74	114
Conifer (volume)	84	94	94	143
All Species (area)	90	60	73	109
All Species (volume)	85**	90	88	134

* Based on one year of information.
* Includes incidental amounts of unplanned poplar volumes.

Planned harvest area declined from 2,078 hectares to 1,417 hectares (annualized) between 1991 and 2003. This resulted from a combination of reductions in the landbase, a change in age class structure from recent disturbances, and deferrals associated with wildlife management strategies. Current projections of future harvest volumes contained in the 2003-2008 FMP indicate a relatively stable trend for approximately 60 years followed by a significant dip for 20 years, recovering to approximately 1991 levels in 100 years. Such changes are not unusual and reflect the dynamic nature of forest growth and the influence of management decisions.

Table 7 suggests that regeneration has not kept pace with harvest levels; however, the principal reason for the apparent shortfall in regeneration treatment versus harvest area is not the failure to treat areas but the lack of prompt reporting of natural regeneration areas. For example, 2,600 hectares of harvest area was planned for natural regeneration between 1991 and 1998, representing 22% of the regeneration program; however, only 340 hectares were reported as receiving natural regeneration treatment. The practice of not reporting natural regeneration treatment until it is FTG was pointed out in the 1991-1996 RPFO, the 1996-1998 RPFO and the 2000 IFA. RLFMCL has accounted for natural regeneration in the ARs since 2001.

Table 7. Harvest versus Regeneration Treatment (average annual).

	1991-1996	1996-1998	1998-2003	Total of 1991-2003
Harvest Area (ha)	1,873	1,584	1,703	5,160
Regeneration Treatment Area (ha)	1,298	759	1,926	3,983
Regeneration Treatment (%)	69	48	113	77

Mechanical site preparation followed by either planting of spruce or seeding of jack pine remains the preferred artificial treatment option on the Forest. Prescribed burns were also successfully conducted. Chemical tending (ground or aerial) and a jack pine thinning program were routinely conducted during the period covered by the TAR.

Table 7 of the TAR summarizes renewal success for the period 1991-1995. During that time, approximately 10,000 hectares was harvested. Of the area surveyed for regeneration success during 1998 and 1999 (15,218 hectares) approximately 10,500 hectares was declared FTG. This represents 104% of the harvest area or 69% of the surveyed area. According to the 1999 AR, reasons for areas not meeting regeneration standards associated with the original silviculture prescription were: spruce not meeting minimum height requirements, stands regenerating to FUs not originally prescribed, or areas assessed before age eight. It is the audit team's observation, based on the field audit, that regeneration on the Red Lake Forest is highly successful and that the survey information represented in Table 7 of the TAR, while accurately reported, may not fully convey this fact.

3.7.4 Achievement of Forest Sustainability

Prior to the implementation of the CFSA, the objective of forest management was to provide timber to the forest industry in a manner consistent with sound environmental practices and to provide for other uses of the forest. With implementation of the CFSA in 1995, recognition was given to the importance of forest sustainability. It should be kept in mind that the means of achieving forest sustainability under the CFSA is through the management of forest cover. According to the CFSA, forest sustainability is defined as long-term Crown forest health. Two key principles are associated with forest sustainability:

- *Large, healthy, diverse and productive Crown forests and their associated ecological processes and biological diversity should be conserved.*
- *The long-term health and vigour of Crown forests should be provided for by using forest practices that, within the limits of silvicultural requirements, emulate natural disturbances and landscape patterns while minimizing adverse effects on plant life, animal life, water, soil, air and social and economic values, including recreational values and heritage values.*

An assessment of forest sustainability occurs at the time an FMP is prepared and again following FMP completion, and is reported in the RPFO and/or the Year 7 and Year 10 ARs.

The methods of planning for and assessing the achievement of forest sustainability are described in the FMPM. It begins with an eight-step process that includes gathering background information, setting objectives and developing strategies, identification and analysis of management alternatives, selection of a preferred management alternative, and the identification of specific areas for forest operations. Throughout the process, opportunities are available to the public to participate and provide input into the development of the FMP. The assessment of achievement of forest sustainability involves the analysis of forecasts and trends associated with a set of criteria and indicators of sustainability given in the FMPM.

In developing its opinion on the achievement of sustainability on the Red Lake Forest the audit team considered the following:

- 1998-2003 and 2003-2008 Red Lake Forest FMPs;
- AWSs and ARs associated with the above FMPs;
- 1991-1996, 1996-1998 and 1998-2003 RPFOs for the Red Lake Forest;
- Comparison and Trend Analysis Report;
- Input from staff of RLFMCL, MNR Red Lake District, wood supply commitment holders and members of the LCC;
- Written input received by the public;
- Implementation and effectiveness of forest management activities on 26 field sites.

The 2003-2008 Red Lake Forest FMP compared harvest, renewal and tending forecasts to the SMA and a final test of sustainability based on the planned harvest allocations for the five-year FMP term was conducted. Forecast levels of forest management activities were close to those of the SMA with the exception of conifer wood supply which was slightly lower than the regionally suggested wood supply. Results compared favourably to the SMA and natural benchmark scenarios with respect to projections of future forest condition and confirmed that long-term forest sustainability and the achievement of management objectives was not negatively impacted. This was also the case for a suite of landscape

pattern indicators. Preferred habitat for selected wildlife species was within the BNV at the point of the desired future forest condition (2063) and only slightly below the BNV for the HwdMx FU.

Reasonable management objectives were set in all planning terms and acceptable progress towards their achievement was achieved. The Forest landbase has declined slightly and further withdrawals associated with OLL are planned, conditional upon replacement wood supplies being provided. Conifer harvest volumes have been mainly achieved but hardwood harvest volumes have not, the latter being principally related to lack of markets. Renewal is keeping pace with harvest and excellent regeneration was observed across the Forest.

A significant decline in available conifer volumes, projected to occur by 2023, may have socio-economic implications that at present cannot be reliably forecast. Total volume available (conifer and hardwood) will remain fairly constant and the impact of the decline in conifer volume may be offset to some extent by the increase in hardwood volume.

The public continues to be involved in forest management planning both formally (e.g. LCC, public Information Centres, Draft FMP and AWS reviews) and informally through direct discussions with RLFMCL and/or MNR staff throughout FMP implementation.

The FMPM lists six generally recognized criteria for monitoring and assessing forest sustainability, five of which apply at the management unit level. These five criteria are presented in Table 8, together with a summary of the audit team's conclusions with respect to their achievement on the Red Lake Forest during the audit term.

Table 8. Summary of Assessment of Forest Sustainability.

Forest Sustainability Criteria	Met (Yes/No/Partial)	Audit Team Comments
Biological Diversity	Yes	Biological diversity is conserved at the landscape, species and genetic level; landscape level indicators maintained within acceptable levels; biological values are mapped and appropriate protection and management provided; no exotic species are introduced.
Forest Condition and Ecological Productivity	Partial	Ecosystem processes and conditions are maintained; rate of harvest is regulated; application of NDPEG must be improved; prompt reforestation to appropriate species; full tree logging on shallow sites needs review; strategies to address regeneration of mixedwood FUs should be strengthened.
Soil and Water Quality	Partial	Protection is provided to riparian areas; water crossing installation, maintenance and removal generally acceptable; road construction practices in fine textured soils need improvement.
Multiple Benefits to Society	Yes	Fibre is efficiently utilized; local and provincial economies receive significant financial benefits; near term future benefits may decline with short-term decrease in available conifer harvest; impacts on other commercial and non-commercial forest users are considered and plans adjusted to accommodate concerns.

Table 8 continued.

Forest Sustainability Criteria	Met (Yes/No/Partial)	Audit Team Comments
Accepting Society's Responsibility for Sustainable Development	Yes	Consultation opportunities with Aboriginal communities, the public, forest stakeholders and others are provided during FMP development and implementation; an LCC provides input and advice.

Based on the information provided and the audit team's review of documentation and examinations of the Forest, it is the opinion of the audit team that forest sustainability is being achieved on the Red Lake Forest, although improvement in some areas is required, as described in the various recommendations and suggestions contained in this audit report.

3.8 Contractual Obligations

RLFMCL has contractual obligations associated with the Red Lake Forest, these being stipulated in the SFL dated April 14, 1999. Conformance with the contractual obligations is a condition of licence extension and was examined by the audit team. The various obligations are listed below with a summary of the audit team's findings for each one.

Payment of forest charges: According to MNR's Forest Business Services, as of October 14, 2005, there was a small amount outstanding for one account on the Red Lake Forest based on material harvested and scaled prior to April 1, 2005.

Wood supply commitments and overlapping licences: Allowable harvest levels on the Forest were adequate to meet the four SFL Appendix E wood supply commitments from the Forest and for all receiving facilities. All Appendix E commitments were met to the extent that the market allowed and the required Memoranda of Agreement (MOAs) were in place and signed by the necessary parties.

Commitment 1, for 175,000 m^3 of hardwood fibre was conditional upon Columbia Forest Products Inc. building a hardwood mill. However the mill was not built and therefore no MOA was necessary and no associated hardwood volumes were utilized.

Recommendation 17: The Ministry of Natural Resources must amend Appendix E of Sustainable Forest Licence 542548 to reflect the fact that the proposed Columbia Forest Products Inc. hardwood mill was not constructed.

During the audit period, the Weyerhaeuser Trus Joist mill was constructed and began operation in Kenora. The Red Lake Forest is part of the wood supply for this mill and to date Weyerhaeuser Company is satisfied with the current progress towards the Red Lake Forest meeting its hardwood supply commitment. The remaining two commitment holders (Devlin Timber, and L.K.G.H. Contracting Ltd) were very satisfied with the level to which the wood supply commitments were fulfilled, as were other receivers of wood through purchase wood contracts. This observation was based on AR data and interviews with company representatives, MNR staff, and RLFMCL staff.

Planning, reporting, information supply and utilization requirements: Since acquiring the SFL in 1999, RLFMCL prepared the ARs and the 2003-2008 FMP. The Company also met its commitments with respect to provision of other information (e.g. inventory updates, FOPs, silvicultural exceptions and effectiveness monitoring, maps) and prepared a five-year compliance plan and associated annual plans of action.

Wood utilization on the Forest was very good. A review of MNR's Red Lake North Area Forest Infraction Spreadsheet showed no infraction penalties during the audit period for utilization (wasteful practices) infractions. A review of Table AR-12.1 and Table AR-12.2 showed that of a total of 320 harvest

inspections done by both MNR and RLFMCL, six (1.8%) resulted in non-compliance findings regarding wasteful practices. None of these resulted in an infraction penalty. Only one instance of wasteful practices was observed during the audit at Field Site 13 at which a large landing contained an unacceptable amount of slasher ends and short pieces.

Salvage harvesting: Salvage harvesting was conducted in 2001-2002 on 370 hectares of blowdown and yielded approximately 51,000 m^3 of conifer volume.

Forest protection: A pest management program was not planned or implemented during the audit period. Natural Resources Canada conducts insect surveys yearly and provides reports on insect pest population levels to RLFMCL.

Performance reviews: An IFA was conducted in 2000, covering the term 1995–2000. For the first four years of the audit term, MNR was the manager of the Red Lake Forest. RLFMCL assumed management responsibilities in the final year. An audit report was produced and an audit action plan was developed by RLFMCL and MNR to address the nine audit recommendations. The action plan also addressed the three suggestions arising from the audit, although it was not a requirement to do so. The approved audit action plan was submitted on time and the action plan status report was submitted one week late.

Forest Renewal Trust Account: The minimum balance requirement of $914,800 was in place on March 31 of each year of the audit term. The adequacy of funds to meet the planned silviculture program was analyzed annually by RLFMCL and reviewed by shareholders. The Provincial Forest Management on-line business site showed that the renewal rate was adjusted during the audit term. The licence requires such an analysis be done at least every five years in conjunction with the term of the FMP and that MNR be jointly involved. MNR provided evidence supporting their review of RLFMCL's request for a rate change for 2004-2005. To assist in its review, MNR tracks the balance in the account and compares this to average annual expenditures, the planned silviculture program in the AWS, projected future requirements, and minimum balance requirements.

Specified Procedures Audit: The audit team conducted an assessment of 23% of the projects funded under the Renewal Trust Fund for the fiscal year 2003-2004. The assessment determined that the maps, records and fieldwork associated with the Forest Renewal Trust Account expenditures for 2003-2004 were accurate and that the fieldwork was appropriate to the site conditions.

Withdrawals: There were two land withdrawals from the SFL, both associated with the OLL initiative. The Hammel Conservation Reserve and Foley Peninsula were removed from the managed land base but remain within the Forest boundaries.

Silviculture standards: Approximate 25% of the silvicultural activities were examined in the field and found to be mapped and reported properly in comparison with the actual work done in the field. The first surveys for FTG since RLFMCL assumed the SFL were completed during the summer of 2005. As of October 21, 2005, the results of these surveys were not available and therefore information regarding any eligible area determined to be not successfully regenerated was not available. The audit team examined several candidate FTG sites during the field audit. The sites had high stocking and trees met the required FTG height. These sites were traceable through the cycle of SGRs in the FMP, FOPs, field operations and regeneration assessment surveys.

MNR provided a map identifying the X,Y and Z lands to RLFMCL. Categorizing lands as X, Y and Z was the method used to determine responsibilities for regeneration of areas harvested before and after April 1, 1995 as part of the negotiations leading to the SFL. The map identified 5,200 hectares of X lands, 2,100 hectares of Y lands, and 6,500 hectares of Z lands. Since the information was not provided in a digital format, the data was not incorporated into the Company's electronic database. However, the map was used to identify areas which required treatment. RLFMCL conducted silvicultural treatments on the identified X, Y, and Z lands. Free-to-Grow surveys were carried out in 2005 and the preliminary data

showed that most of the areas of X, Y and Z lands met FTG standards. The final totals of FTG will be available in December 2005. A representative sample of the silvicultural records was chosen for the field audit. The audit showed that silvicultural treatments were applied appropriately and that the sites showed a high regeneration success.

RLFMCL has made concerted efforts to regenerate all the harvested area. Since the Forest is so small and wood supply is an issue on this SFL, they are very concerned that harvested areas are returned to productive forest as soon as possible. To assist in this effort they have accelerated the regeneration process by conducting site preparation and planting/seeding within two years of harvest completion.

Aboriginal opportunities: Repeated attempts by the audit team to contact representatives of Pikangikum First Nation, Lac Seul First Nation, and a local Aboriginal trapper by mail and telephone were unsuccessful. Discussions with respect to Aboriginal opportunities on the Red Lake Forest were held with MNR and RLFMCL staff. RLFMCL has worked with First Nations to achieve more equal involvement in the benefits associated with forest management planning. RLFMCL made a formal offer to Pikangikum First Nation for silvicultural work and training opportunities in harvesting and equipment operation several years ago, but no interest was expressed. According to RLFMCL, First Nation members are working as employees in bush operations for some Class B shareholders on the Red Lake Forest. Attempts by MNR to retain Aboriginal trappers for beaver removal failed due to insurance considerations. The efforts being made by MNR to establish Whitefeather is a significant undertaking that will potentially provide substantial opportunities to Pikangikum First Nation.

Compliance planning and monitoring: RLFMCL had Five Year Compliance Plans in place for the audit period. This was supported by Annual Compliance Plans. It is the opinion of the audit team that, given the evolution of compliance monitoring and related requirements over the audit period, these strategies and plans conform to standards established by the Minister. Approval dates for the Five-Year and each Annual Compliance Plan were checked against the issuance dates of a sample of Approvals and/or Forest Resource Licences. In all cases, Approvals and/or Forest Resource Licences were issued after the Compliance Plans were approved.

The RLFMCL provided evidence of annual training for Class B shareholders and/or their operators that included training with respect to compliance reporting, new guidelines, forest fire prevention and preparedness, fire plans, and ES12 best practices and monitoring. It was observed that the compliance strategies and plans were supported by internal education and prevention programs. Both MNR and RLFMCL have certified inspectors in place and over the first four years of the audit period, 528 compliance inspections were conducted through the efforts of both parties. Of those inspections, eight MNR non-compliance findings were considered to be significant. At the time of the field audit there were no outstanding infraction penalties.

The audit team considers the scope of FOIRs on the Red Lake Forest to be adequate for the level of operations and that contractual obligations in this regard were met.

Operations on mining claims: According to interviews with RLFMCL, forestry activities occurred on mining leases or claims during the audit period. The SFL requires that, following receipt of the AWS, MNR must notify all recorded and patented claim holders located within the proposed operating area of the Company's intent. The evidence available on file was intermittent. For example, for the first year of the audit term (2000-2001) the mailing list and a copy of the notice were on file; only the mailing list was on file for second year of the audit term (2001-2002), nothing was on file for the third and fourth years of the audit term, the file for the 2004-2005 term contained the mailing list, a copy of the notice used and documentation of the claim searches performed for the area. Incomplete records do not permit verification that MNR met notification requirements to recorded and patented claim holders.

MNR is also required by Section 22.3 of the SFL to advise the Company of any known, new or existing activities within the Licence Area authorized by the Minister pursuant to the Public Lands Act[33] (PLA). MNR provided the audit team with an example of a notice to RLFMCL regarding a PLA land-use disposition that occurred. According to MNR, these notices and any applicable correspondence are filed with the PLA disposition; hence, it is difficult to look them up as a group.

Recommendation 18: The Ministry of Natural Resources must maintain complete accessible files to be able to demonstrate that the requirements of Sections 22.2 and 22.3 of the Sustainable Forest Licence are met.

Actions Associated with the 2000 Independent Forest Audit

A total of nine recommendations (including licence extension) were made in the 2000 IFA report. In the view of the audit team all but two recommendations were fully addressed.

Table 9 summarizes the recommendations and also indicates those that require further attention.

Table 9. Assessment of Achievement of the 2000 IFA Recommendations.

Recommendation Number	Responsibility Assigned in Action Plan	Summary of Recommendation*	Completed Yes/No/Partial
1	RLFMCL	Company to develop a policy statement.	Yes
2	RLFMCL	Documented AOC prescriptions shall be adhered to by operators in the field.	Yes
3	MNR & RLFMCL	Operators receive licences with accurate AOC information and mapping.	Yes
4	MNR & RLFMCL	Investigate the development of cost sharing agreements for road maintenance with other users.	Yes
5	RLFMCL	Training programs developed and implemented for all SFM activities.	Yes
6	RLFMCL & MNR	Improve the transfer of information pertaining to the FMP.	Yes
7	RLFMCL & MNR	Investigate ways and means of adding new wood supply to the Red Lake Forest SFL.	Partial (See Recommendation 16)
8	RLFMCL	Natural regeneration be included in the Annual Reports.	Yes
9	RLFMCL & MNR	Minister to extend term of Licence.	Partial All actions completed except licence extension which was in the process of being signed at the time of the 2005 IFA.

*Recommendations from the 2000 IFA are paraphrased in the interest of space.

[33] Public Lands Act, R.S.O. 1990. c. P. 43.

4.0 Summary of Conclusions and Recommendations

The audit team concluded that, with the exceptions noted in the audit report, management of the Red Lake Forest was in compliance with legislation, regulations and policies and was effective during the term of the audit. The Red Lake Forest was also managed in compliance with the terms of SFL No. 542548 held by RLFMCL. Forest sustainability is being achieved as assessed through the Independent Forest Audit Process and Protocol.

Both RLFMCL and MNR are committed to sustaining the Red Lake Forest, this commitment being evident by the quality of forest management planning and the hands-on management and on-the-ground knowledge of the Forest by staff. Management efforts are supported by a knowledgeable LCC with many long-term members among its membership. Some efforts are necessary to improve attendance at LCC meetings. The public was provided opportunities to participate in planning and both MNR and RLFMCL are receptive to public queries during FMP implementation. Improvement in record keeping for notices is required. The 2003-2008 FMP was well written with a thorough explanation of management context and assumptions. Modelling for timber and other values was well done. Planning requirements associated with certification and distribution of FMP amendments must be addressed.

The 1998-2003 and 2003-2008 Red Lake Forest FMPs were adequately implemented during the audit term. Harvest levels for conifer were consistent with planned levels; however, hardwood fibre continues to be underutilized due to lack of markets. The regeneration program is highly effective and thriving plantations and naturally regenerated areas were observed across the Forest. An active program of spacing in young jack pine stands will contribute to shorter rotations and improved future yields. Improvements are necessary to road construction operations in areas of fine textured soils. AOC prescriptions were implemented as planned and harvest boundaries were respected.

Regular compliance inspections were conducted by both RLFMCL and MNR, and noncompliances noted during inspections were addressed. There were no trends evident in the type of infraction or the responsible party. Monitoring and reporting through ARs and RPFOs met requirements.

Appropriate and reasonable objectives were set and progress towards their achievement was acceptable. Some objectives and indicators of forest sustainability could not be fully met given the age class structure of the Forest, as impacted by large recent natural disturbances. The Red Lake Forest is on track towards the desired future forest condition and the Forest is being sustained.

All contractual obligations were fully met. Seven of the Recommendations from the previous IFA were fully met and two were partially addressed. At the time of the audit, the Minister had not signed the SFL to extend the term of the Licence by a further five years, as recommended in the previous IFA. According to MNR, the term of the Licence is in the process of being extended.

A key issue remains to be resolved, that being bringing closure to proposed withdrawals from the Forest for addition to Woodland Caribou Provincial Park. Should the withdrawals occur, MNR has committed to providing replacement wood supplies. The audit team believes that the issue of the withdrawals and replacement wood supply must be resolved in a timely manner.

Table 10 provides a summary, by responsible party, of the number of recommendations, suggestions and best practices identified during the audit. A complete list is given in Table 11.

Table 10. Summary of Recommendations, Suggestions and Best Practices by Responsible Party.

	RLFMCL	MNR	RLFMCL and MNR	MNR and LCC	Total
Recommendations	4	14	1	-	19
Suggestions	4	6	-	1	11
Best Practices	1	-	-	-	1

Recommendation 19: Based on the outcome of this audit and performance with respect to its contractual obligations, the audit team recommends the Minister extend the term of the Red Lake Forest Company Ltd. Sustainable Forest Licence 542548 to March 31, 2028.

Table 11. Summary of Recommendations, Suggestions and Best Practices.

Principle 1: Commitment
Suggestion: 1. Red Lake Forest Management Company Ltd. should consider reviewing its policy statements outlining its commitment to sustainable forest management and incorporating references to the following items: • Respect for Aboriginal and treaty rights; • Provide for public consultation; • Provide conditions and safeguards for the health and safety of employees and the public; • Encourage forest research; and • Improve knowledge about the forest and sustainable forest management and monitor advances in sustainable forest management science and technology.
Principle 2: Public Participation
Recommendations: 1. The Ministry of Natural Resources must update the Local Citizens Committee Terms of Reference to meet the requirements of Part A, Section 3.2.4 of the Forest Management Planning Manual and facilitate the effectiveness of the Local Citizens Committee in forest management planning. 2. The Ministry of Natural Resources must ensure that forest management planning notices to Aboriginal communities meet the requirements of the Forest Management Planning Manual. 3. The Ministry of Natural Resources must ensure that the Notice of Annual Work Schedule Public Inspection to Aboriginal communities meets the requirements of the Forest Management Planning Manual. 4. The Ministry of Natural Resources must ensure that accurate and complete records of Annual Work Schedule public notifications are maintained to demonstrate that Forest Management Planning Manual timing requirements are met.
Suggestions: 2. The Ministry of Natural Resources should consider the use of conferencing technology and/or travel subsidies to provide remote First Nations more accessible opportunities for participation on the Local Citizens Committee. 3. The Ministry of Natural Resources should consider establishing minimum attendance requirements for membership on the Local Citizens Committee as part of the Terms of Reference. 4. The Ministry of Natural Resources should consider the use of a facilitator in Local Citizens Committee meetings to ensure clear direction is determined and articulated through Local Citizens Committee meeting minutes, motions and resolutions. 5. The Ministry of Natural Resources should consider placing public notices in more than one newspaper. 6. The Ministry of Natural Resources should consider including a field in each of the mailing lists created and used throughout the forest management planning process, that identifies a person's or organization's interest and/or affiliation on the Forest.

Table 11 continued.

Principle 3: Forest Management Planning
Recommendations: 5. The Ministry of Natural Resources must ensure for future plans that planning team participation requirements, described in the planning team Terms of Reference, are accurately defined and followed. 6. The Ministry of Natural Resources must make all reasonable efforts to ensure, for the 2008-2018 FMP, that the socioeconomic description includes detailed information on non-industrial and non-commercial users of the Forest and associated data, as prescribed by the Forest Management Planning Manual. 7. Red Lake Forest Management Company Ltd. and the Ministry of Natural Resources must ensure that required reviews of the socioeconomic modelling analysis is conducted by the Local Citizens Committee. 8. Red Lake Forest Management Company Ltd. must ensure that all amendments are certified by a Registered Professional Forester. 9. The Ministry of Natural Resources must ensure that amendment notices to Aboriginal communities meet the requirements of the Forest Management Planning Manual. 10. The Ministry of Natural Resources must ensure that all amendments are distributed to the required locations and within the required timelines.
Suggestions: 7. The Ministry of Natural Resources Forest Management Branch should consider developing economic metrics for non-industrial benefits. 8. Red Lake Forest Management Company Ltd. should ensure that strategies to meet moose habitat management objectives are clearly described in the forest management plan. 9. The Ministry of Natural Resources, in cooperation with the Local Citizens Committee, should include a review of the Committee's role in the categorization of amendments to ensure that it is consistent with the requirements of the Forest Management Planning Manual and the desired level of involvement of the Committee, when reviewing and updating the Committee's Terms of Reference.
Best Practice: 1. The audit team commends Red Lake Forest Management Company Ltd. on their efforts in implementing the Resource Stewardship Agreement process well in advance of the full requirements.
Principle 4: Plan Implementation
Recommendations: 11. Red Lake Forest Management Company Ltd. must ensure that all exceptions to Guides that arise during forest management plan implementation are properly documented and effectiveness monitoring is reported. 12. Red Lake Forest Management Company Ltd. must review snag requirements with Overlapping Licensees and monitor operations, to ensure that snag requirements are met. 13. The Ministry of Natural Resources Northwest Region must review the need to place additional conditions on the approval of full tree logging on ES11 and ES12 ecosites in Northwestern Ontario, including delineation of the extremely shallow and rocky portions of these sites and omitting them from harvest. 14. Red Lake Forest Management Company Ltd. must implement road construction and maintenance practices that minimize disturbance of fine-textured soils.

Table 11 continued.

Principle 4: Plan Implementation
Suggestion:
10. Red Lake Forest Management Company Ltd. should review the mixedwood forest unit renewal strategies during preparation of the 2008-2018 Red Lake Forest Forest Management Plan and develop active management strategies that support the desired level of maintenance of mixedwood forest units.
Principle 5: Systems Support
None
Principle 6: Monitoring
Recommendation:
15. The Ministry of Natural Resources must ensure that Condition 34 reporting requirements are met, as required by the Environmental Assessment Declaration Order.
Suggestion:
11. Red Lake Forest Management Company Ltd. and the Ministry of Natural Resources should review information flow timing requirements regarding Annual Reports.
Principle 7: Achievement of Management Objectives and Forest Sustainability
Recommendation:
16. The Ministry of Natural Resources must take timely action to fulfill their commitment to Red Lake Forest Management Company Ltd. to identify replacement wood supplies for the proposed Ontario's Living Legacy additions.
Principle 8: Contractual Obligations
Recommendations:
17. The Ministry of Natural Resources must amend Appendix E of Sustainable Forest Licence 542548 to reflect the fact that the proposed Columbia Forest Products Inc. hardwood mill was not constructed.
18. The Ministry of Natural Resources must maintain complete accessible files to be able to demonstrate that the requirements of Sections 22.2 and 22.3 of the Sustainable Forest Licence are met.
Conclusion
The audit team concluded that, with the exceptions noted in the audit report, management of the Red Lake Forest was in compliance with legislation, regulations and policies and was effective during the term of the audit. The Red Lake Forest was also managed in compliance with the terms of SFL No. 542548 held by Red Lake Forest Management Company Ltd. Forest sustainability is being achieved as assessed through the Independent Forest Audit Process and Protocol.
Recommendation:
19. Based on the outcome of this audit and performance with respect to its contractual obligations, the audit team recommends the Minister extend the term of the Red Lake Forest Company Ltd. Sustainable Forest Licence 542548 to March 31, 2028.

Appendix A

Comparison and Trend Analysis of Planned versus Actual Forest Operations Report

Comparison and Trend Analysis of Planned vs Actual Forest Operations Report

For the five year period from April 1, 2000 to March 31, 2005

Prepared by

Richard Cameron

Richard Cameron R.P.F. Se[illegible]

Date: Sept 22 05

For

Red Lake Forest Management Co. Ltd.

Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report for the Red Lake Forest

Introduction

This report summarizes forest operations on the Red Lake Forest for the period from April 1, 1991 to March 31, 2004. This period covers four separate planning terms. The current term refers to the 2003-2008 Forest Management Plan (FMP), for which the 2003-2004 annual report was used to compare actual figures. The second term covers the 1998-2003 FMP for which the RPFO is prepared, the third term is the 1996-1998 contingency plan and the fourth term is the 1991-1996 plan prepared under the Timber Management Planning Manual of Ontario. Information for this report was sourced from data from these four planning terms.

The current FMP (2003-2008) does not include any patent lands as they are not included in the Sustainable Forest License #548542. Patent lands were included in the calculation of available harvest area in the previous three terms prior to the SFL existing. It is possible that in some tables patent land has been included and where it is obvious it has been noted as a footnote of the table. Other tables may include patent land in the summaries but it was not always possible to distinguish from Crown Managed.

It should also be noted that the 2003-2008 FMP was written using a 1997 Forest Resource Inventory (FRI) in the NAD 83 projection. The 1998-2003 FMP FRI was re-projected from NAD 27 to NAD 83 for use by the company (RLFMCL). The 1998-2003 plan was managed by the crown for one operating year prior to the RLFMCL taking responsibility for the unit in April 1999. The Audit period will cover operations on the Red Lake Forest under the management of the RLFMCL.

During this audit period several landbase changes have occurred. These include removals for parks and Conservation Reserves as directed by Ontario's Living Legacy, as well as interim protection for park additions and the Enhanced Management Areas. There have also been changes to the management unit boundaries, patent land changes as well as new land base projections and a new FRI.

It should also be noted that some large disturbances such as the 1986 fire on the Pineridge and the 1980 fire on the Dixie Lake Road, as well as the large blowdown of 1991 in the Dixie Lake area have had major effects on the land classification. Over time a general trend from land classified as Barren and Scattered (B & S) has returned back into the productive age classes. This trend has been noted throughout the four terms identified. In order to prepare the 2003 planning inventory, MNR and the RLFMCL cooperatively reclassified over 4,000 ha of B & S originating from these large natural disturbances. These surveys have not been reported in the tables. They were mainly in the PjDee and SbDee forest units (FU).

Table 1- Summary of Total Area Under Management

1. Total Forested decreased in the 2003 plan by 3800 ha from the 98-03 plan. This was mainly due to the change of inventory from the two previous plans. The 1997 inventory was finalized and used for the 2003 plan. In this table no patent land has been included as indicated in the source information.
2. To be noted is the large drop in the amount of B&S over the period reviewed. B&S went from a high 45,380 ha in the 91-96 term to, 40,513 ha in the 96-98 plan, to 37,027 ha in the 1998 plan, to 12,203 ha in the 2003 plan. At the beginning of the 2003 plan a serious attempt was made to reduce the amount of B&S before planning started. In the summer of 2001 a cooperative effort by MNR and RLFMCL was made by conducting aerial surveys to verify the classification. It was found that many of the B&S stands were stands that had been naturally depleted during the 1991 blowdown, budworm infestation of the balsam fir stands, and large fires. Over 4,000 ha were brought back into the inventory at the time. Many of the large disturbances were starting to come back into productive forest as shown in the 1997 FRI photography.
3. A notable increase in Po and Bw FU is evident. This would also show the effects of the large disturbances, with many of the young stands coming back as poplar and birch through natural regeneration. This is to be expected until such time as the stands get older and we see the species composition changing to a more mixed wood condition. It is expected that Po allocations will increase substantially in the 2008 plan. Since the opening of the Trus Joist facility in Kenora in 2003 the poplar market has improved.
4. The Balsam Fir FU area has decreased substantially to 109 ha in the 2003 plan from 9,200 ha in the 91 plan. The balsam fir which was dominant in many stands was destroyed by the budworm and has now succeeded to other forest units. The RLFMCL has completed several projects to convert balsam fir (B&S)stands to intensively managed stands of white and black spruce. Forestry Futures Trust has been a major contributor to these projects.
5. The land base has been reduced from 206,365ha in the 1991 plan to 200,845 ha in the 2003 plan. Almost 6,000 ha has been lost from the total area under management due to OLL, conservation reserves, parks and others.

Table 2- Description of Forest Units

1. Forest Units have changed slightly over time with the major change occurring in the current 2003 plan. The current FU were derived largely on an eco site type basis. Some major changes include no Balsam Fir FU, and the addition of a Po FU. The Po forest unit was created with the intention of purifying some of the mixed hardwood stands over to poplar.
2. The other significant change is the creation of the CoSha FU, which is based purely on eco site 12. Full tree harvesting is not recommended on these sites and must be noted as an exception in the forest management plan. A monitoring program must be identified to practice full tree harvesting on these sites. RLFMCL is a partner in the northwest region project for monitoring and assessing harvesting operations on ecosite 12.
3. Several other minor changes in the Forest Units were evident in the 2003 plan as the regional forest units template was used as a starting point.
4. The Red Pine (PrMan) remained as a forest unit in the 2003 plan, however it is anticipated that as these plantations age they may evolve into the PjDee FU . The planting of smaller numbers of red pine is being done to try and increase the saw log component on suitable sites.

Table 3-Summary of Planned & Actual Harvest Volumes or RPFO-4

1. Jack pine planned harvest volumes are decreasing with each plan as is the total volume available for harvest. It is expected that this trend will continue for several more plans before the large disturbances reach eligible harvest age.
2. The Hwd FU has been underutilized over the term of this report. Only in the last 2 years has the volume of Po harvested started to increase. It is anticipated that the Po FU volumes will continue to be utilized more as time progresses. The total volumes planned for harvest are also decreasing over time. It is expected that total volume will continue to drop for several more terms, until the 1980 fire disturbance area reach rotation age.
3. A significant contribution to this situation is the actual location of the harvest allocations. Most of the allocations in the Caribou blocks have very high volumes per hectare, whereas allocations in the moose managed areas have quite low volumes per hectare. If future harvest is restricted to areas of moose management on the south side of Red Lake, volumes will be much lower.
4. The trend has been to under harvest the total available volume. This is due to several reasons. The Red Lake forest is the furthest away from the mills and therefore is the most expensive wood to buy on the open market. Other factors that have contributed to this trend have been the cost of fuel and insurance for trucking. The booming mining industry in Red Lake Area has provided more opportunities for some of the operators to maximize their profits through other work, and thus have concentrated less on harvesting operations.
5. Changes in Class B ownership of the RLFMCL has also affected harvest patterns in the past several years, and should improve as demonstrated in the first year of the new plan.
6. Seasonal mill shut downs in Kenora and large disturbances in other districts (Sioux Lookout) have affected wood flow from Red Lake as well.
7. It should also be noted that in the 2003 plan , the harvest volumes were much higher than the annual harvest allocation. The primary reason for this is the better market conditions and available wood.

Table 4- RPFO-2 or Summary of Planned and Actual Depletion Area

1. Most of the comments for Table 3 also apply to Table 4.
2. The most noticeable differences in this table is the significant decrease in planned annual harvest area down from a high of 2,636 ha in the 96-98 plan to 2,332 ha in the 98-03 plan and again down to 1,417 ha in the 2003-08 plan the lowest it has been since 1991. Although the annual harvest area (AHA) has been dropping significantly, harvest volumes have remained relatively close for the 98 and 03 plans. Yield curves have been adjusted in the 2003 plan to reflect actual volumes harvested.
3. The Sustainable Forest Management Model (SFMM) modelling indicates that the AHA is expected to continue to drop for several more terms. The large disturbances and the guidelines have a major effect on allocations especially on such a small forest. However once these large disturbances come on line, it is expected that the AHA will increase significantly.

Table 5- Summary of Managed Productive Forest by Forest Unit

1. The 9,000-13,000 ha of Bf FU in the 91,96 and 98 plans has succeeded into a different forest unit in the 2003 plan. Some of this might have gone into the Po forest unit.

2. The increase in the PjDee forest unit (2003-08) over the Pj1 from both previous terms is clearly a result of the large disturbances starting to move into the 1-20 and 21-40 age classes. Significant increases in area for both of these age classes is a trend we would expect to see continue for several more terms.
3. The SbDee is starting to show the older plantations that have met Free Growing Standards (FTG) and are moving into the 1-20 age class.
4. Even though jack pine seems to regenerate naturally quite well, the SbDee and the SbLow FU still comprise some 64,000 ha, while the PjDee FU is 52,000 ha, CoSha is made up of Sb and Pj as well as mixed conifer. The species composition seems to be staying split between spruce and pine.
5. The trend shows that large disturbances normally come back strongly to pine, however stand dynamics seem to show that as stands mature the species composition is a mixture of pine and spruce.

Table 6- Summary Report of Renewal, Tending and Protection Operations

1. This table shows total term results for planned and actual for the 91-96 term, 96-98 and the 98-03 term. The current term shows planned for the term, but only the one year (2003) actual for the 2003 plan.
2. The 1998 plan identified 1,869 ha for natural regeneration and 560 ha were done. This is due partly to greater tree planting efforts in the SbDee FU, as well as the fact that theSb2 and Pj2 FU was under harvested during the term.
3. Artificial regeneration levels rose over the 3 terms. Salvage operations in the Dixie Lake blow down area attributed to the change in the numbers, as harvesting and regeneration treatments have followed planned activities for the last 5 years.
4. Site preparation is lower than planned for the 98-03 term due mostly to area not having been harvested.
5. Pre-commercial thinning was lower than planned. The RLFMCL with assistance from Forestry Futures Trust started thinning programs in 2000 in the 1986 Pineridge burn and have continued with thinning projects each year since then. The RLFMCL achieved 762 ha of thinning in the 1998 plan in three years of operations. In 2003, the RLFMCL completed 394 ha of thinning and has projects set up to complete the total planned of 750 ha by year 3 of the plan.
6. Aerial spray has been lower than planned. This is partially due to the fact that artificial regeneration is generally taking place within 6 months to 1 year following harvest operations. This practice is favourable for stand establishment and requires less aerial tending by limiting the competition establishment in the early years. Tending programs are generally set up every second or third year to maximize economies of scale. Reducing tending cost is a direct result of early stand establishment and provides a cost saving to the company.

Table 7- Harvest Area Successfully Regenerated –Summary of All Forest Units

1. The FTG surveys in 1998 and 1999 were completed by MNR and reported in AR-7 for the 1998 and 1999 annual reports. Of the forest units and silviculture treatment packages planned for 2,476 ha were completed and another 12,742 ha were completed on other combinations of forest units and silvicultural treatment packages. Of the 15,218 ha of FTG surveys completed 10,544 ha met regeneration standards. It is assumed that the other 5,000 were not sufficiently regenerated (NSR) or B&S.

2. Currently the RLFMCL is conducting approximately 9,400 ha of FTG surveys including 7,600 ha of regeneration between 1988 and 1998, and 1,800 ha between 1999 and 2000.
3. Extensive surveys for height only are also being done in 2005 for 1,400 ha of regeneration originating between 1984 –1987 which was not FTG surveyed as well as the pre-commercial thinning blocks, 1, 700 ha from 1999 to 2004.
4. Extensive surveys are being conducted on all the FTG surveys from 98-99 which were less than 3m in height. In some cases where the survey did not meet the regeneration standard (classified as B&S) new stocking, species comp and height is being recorded. These surveys will be used to update the inventory before planning starts for the 2008 plan. This project is to be completed by September 2005.
5. With the 2005 extensive surveys almost complete many of the areas classified in the B&S category from the 98-99 FTG surveys are now meeting FTG. With the information available from the 98-99 FTG and the present data we believe that most harvest and natural depletions are regenerating satisfactorily. Stand dynamics seem to indicate early regeneration to jack pine however after year ten or so there seems to be a substantial amount of spruce regeneration even in the natural regeneration areas. In the artificial regeneration areas of planted spruce, the dominant species seems to change over time, with spruce at the beginning then changes over to pine for some time and later back to spruce. Many of the sites that are 15 years of age are starting to show mixtures of pine and spruce, similar to the original harvested composition. The natural regeneration areas tend to follow the same pattern in a different sequence. This is much more evident on the deep fertile soil types.
6. To date surveys are showing that areas regenerated artificially in the 1999 –2000 yrs are meeting FTG standards already. The weather and climate in the Red Lake Forest are conducive to success with the regeneration methods used in this unit.

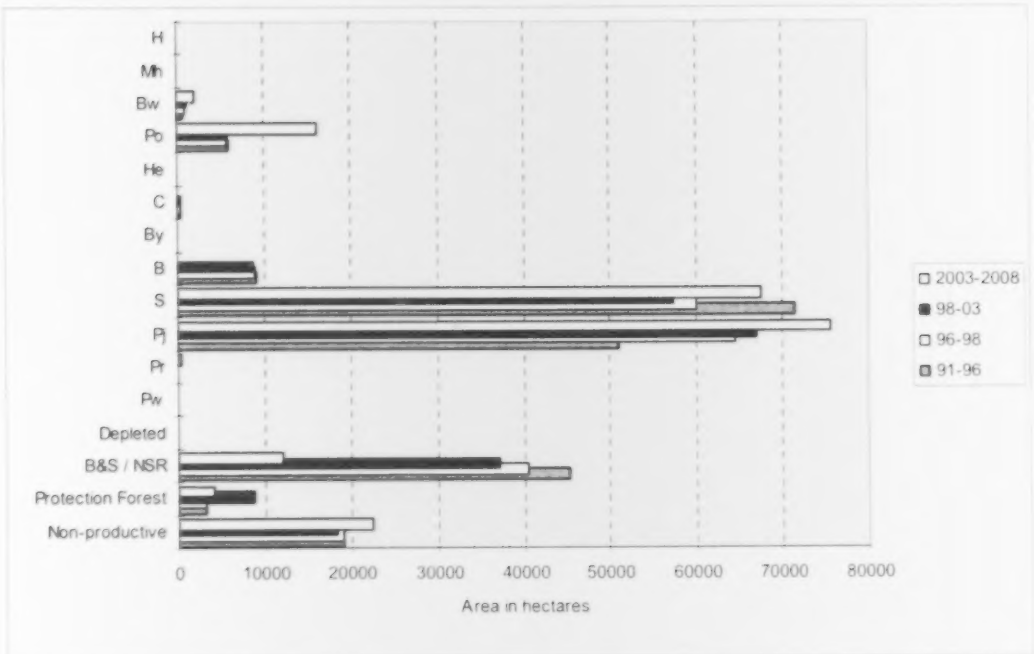
2005 Independent Forest Audit

Table 1 - Summary of Total Area Under Management

Past and Current Plans - Crown Managed

MU: Red Lake Forest Management Unit

		Area in hectares			
		Past Plans			Current
Land Type	Plan Term	91-96	96-98	98-03	2003-2008
Non-Forested					
Other Land		1,261	1,261	1,831	2,679
Forested					
Non-productive		18,992	18,992	18,244	22,404
Productive					
Protection		3,100	3,100	8,795	4,149
Production Forest					
B&S / NSR		45,380	40,513	37,027	12,203
Depleted			-	-	-
Forest Stands by Working Group					
Pw		0	-	-	-
Pr		64	253	255	313
Pj		51,107	64,502	66,860	75,506
S		71,456	60,038	57,396	67,546
B		9,200	8,917	8,798	109
By		0	-	-	-
C		318	337	358	259
He		0	-		-
Po		6,032	5,859	5,811	16,208
Bw		676	867	1,105	2,137
Mh		0	-	-	-
H		40	-	41	11
Total Production Forest		184,273	181,286	177,651	174,292
Total Forested Land		206,365	203,378	204,690	200,845



Source: 98-03 plan and 03-08 plan FMP Table FMP-1.FMP-2
96-98 plan TMP Table 1.2.1, 2.2, 2.3
91-96 plan Table 4.8.2 crown ownership FRI code 1

2005 Independent Forest Audit – Red Lake Forest
Table 2 – DESCRIPTION OF FOREST UNITS (FMP-8)
April 1, 2003 to March 21, 2008

Forest Unit		Forest Type	Main Working Group	Site Types	Silvicultural System	FRI Parameters & Criteria	Additional Information
Code	Name						
ConMx	Conifer Dominated Mixedwood	Conifer	Black Spruce and Jack Pine	ES 13, 14, 19, 20, 21, 22, 25, 26, 27, 28, 29, 31, 32, 33	Clear cut	Sort Order 8: Sb + Sw + Pj + Pr + Bf + Ce + La = 0.5	
CoSha	Shallow Conifer Sites	Conifer	Jack Pine	ES 12	Clear cut	Sort Order 2: ES = 12 and (Sb + Sw + Pj) = 0.5	
HwdMx	Intolerant Hardwood Mix	Mixedwood	Poplar	ES 12, 13, 16, 19, 20, 23, 25, 28, 29, 33	Clear cut	Sort Order 7: Mh + Uh + Lh = 0.3 OR Sort Order 9: Po + Bw + Mh + Uh + Lh = 0.5	
PjDec	Productive Jack Pine	Conifer	Jack Pine	ES 13, 14, 19, 20, 21, 22, 25, 26, 31	Clear cut	Sort Order 5: (Pj = 0.7 OR (Sb + Sw + Pj = 0.8 AND Pj > Sb + Sw)) AND Po + Bw = 0.2	
PoAll	Poplar	Intolerant Hardwood	Poplar	ES 19, 21, 23, 28, 29, 33	Clear cut	Sort Order 6: Po = 0.7 OR (Po + Bw = 0.8 AND Po = 0.5)	
PrMan	Red Pine Plantations	Conifer	Red Pine	ES 13, 19, 20	Clear cut	Sort Order 1: Pw + Pr = 0.4	
SbDec	Productive Black Spruce	Conifer	Black Spruce	ES 13, 14, 19, 20, 21, 22, 25, 26, 27, 29, 31, 32	Clear cut	Sort Order 4: (Sb + Sw = 0.7 OR (Sb + Sw + Pj = 0.8 AND Sb + Sw = Pj)) AND Po + Bw = 0.2	
SbLow	Black Spruce Lowland	Conifer	Black Spruce	ES 20, 22, 31, 34, 35, 36	Clearcut	Sort Order 3: Ce + La = 0.5 OR (WG = Ce or La AND Pw + Pr + Pj + Sb + Sw + Bw = 0.1) OR Sb + La + Ce = 1.0 AND (SC = 3 or 4) OR (Sb + Sw = 0.7 OR (Sb + Sw + Pj = 0.8 AND Sw + Sb = Pj)) AND Po + Bw = 0.2 AND (ES = 35 or 36)	

Source: FMP 2003-2008 Table FMP-8

2005 Independent Forest Audit – Red Lake Forest
Table 2 – DESCRIPTION OF FOREST UNITS (FMP-8)
April 1, 1998 to March 21, 2003

Forest Unit		Forest	Main	Site	Silvicultural	FRI Parameters	Additional
Code	Name	Type	Working Group	Type(s)	System	& Criteria	Information
Pj1	Productive Pine	Conifer	Jack Pine	Productive Pj dominated sites usually associated with deep sandy and coarse loamy soils	Clearcut	Jack pine working group, site classes X, 1, 2, regular forest only	
Pj2	Shallow soil Pine Sb	Conifer	Jack Pine	Pj and Sb stands growing on shallow soils	Clearcut	Jack pine working group, site class 3, PFR and regular. Jack pine working group site class X,1,2, PFR only. Black Spruce working group, site class X, 1 ,2, PFR only.	Although a wide range of soil depth and moisture regime exists on these sites, they are generally less productive than the deep soil forest
Sb1	Productive Spruce	Conifer	Spruce All	Productive Sb and Sw dominated stands growing in deep soils.	Clearcut	Spruce working group, site classes X, 1, 2, regular forest only.	These stands are encountered on a wide range of soil textures and moisture regimes.
Sb2	Lowland Spruce	Conifer	Black Spruce	Less productive Sb stands on organic , wet sites.	Clearcut	Spruce working group, site class 3, regular forest. Any working group with Larch in the composition.	Often associated with Larch.
All Pr	Red Pine Plantations	Conifer	Red Pine	Normally established on deep well drained sandy and coarse loamy soils.	Clearcut	Red Pine Working group.	Current forest comprised entirely of plantations.
All Bf	Balsam all sites	Conifer	Balsam Fir	All sites	Clearcut	Balsam Fir working group.	
Hwd	Hardwood all sites	Intolerant Hardwood	Poplar	All sites	Clearcut	All Poplar and White Birch working group	

Source: FMP 1998-2003 Table FMP-8

2005 Independent Forest Audit – Red Lake Forest
Table 2 – DESCRIPTION OF FOREST UNITS (FMP-8)
April 1, 1996 to March 21, 1998

Forest Unit		Forest Type	Main Working Group	Site Types	Silvicultural System	FRI Parameters & Criteria	Additional Information
Code	Name						
SB1	Spruce on Productive Sites	Conifer	Spruce	fresh silt to clay. (S3)**, S4,S5. SB. SS7. -moist silt to clay. S7. S8. S9. S10. SS8	Clearcut	Site Classes X. 1 and 2. Regular Forest only.	
SB2	Spruce and other conifer on lowland sites	Conifer	Spruce	peaty phase and organic soils . S11. S12F. S12S. SS9	Clearcut	Spruce and other conifer WG . Site Class 3. Regular and protection forest reserve (PFR). Any larch in the species composition.	
PJ1	Pine on Productive Sites	Conifer	Jack Pine and Red Pine	dry. deep sandy soils. S1. S2. (S3)** fresh silt to clay. (S3)** . S4. S5. S6. SS7. Moist silt to clay S7. S8. S9. S10. SS8	Clearcut	Red and Jackpine WG. Site Class X. 1. & 2. Regular Forest Only	
PJ2	Shallow Sites	Conifer	Jack Pine	dry. shallow sands and loam's (bedrock)	Clearcut	Jackpine Wg . A0 Site 3 PFR and Regular B) Site class X. 1 and 2 and PFR Spruce WG site Class X.1 &2 PFR only	
B	Variable	Conifer	Balsam Fir		Clearcut	Balsam fire WG. all site classes	
HWD	Variable	Deciduous	Poplar		Clearcut	poplar. white birch. all site classes	

Source: FMP 1996-1998 Table 9

2005 Independent Forest Audit – Red Lake Forest
Table 2 – DESCRIPTION OF FOREST UNITS (FMP-8)
April 1, 1991 to March 21, 1996

Forest Unit		Forest Type	Main Working Group	Site Types	Silvicultural System	FRI Parameters & Criteria	Additional Information
Code	Name						
SB1	Spruce on Productive Sites	Conifer	Spruce	fresh silt to clay, (S3)**, S4,S5, S6, SS7; moist silt to clay, S7, S8, S9, S10, SS8		Site Classes X, 1 and 2. Regular Forest only.	
SB2	Spruce and other conifer on lowland sites	Conifer	Spruce and Other Conifer	peaty phase and organic soils S11, S12F, S12S, SS9		Spruce and other conifer WG . Site Class 3. Regular and protection forest reserve (PFR).	
PJ1	Pine on Productive Sites	Conifer	Jack Pine and Red Pine	dry, deep sandy soils S1, S2, (S3)** fresh silt to clay, (S3)** , S4, S5, S6, SS7. Moist silt to clay S7, S8, S9, S10, SS8		Red and Jackpine WG. Site Class X, 1, & 2. Regular Forest Only	
PJ2	Shallow Sites	Conifer	Jack Pine & Spruce	dry, shallow sands and loam's (bedrock) SS1, SS2, SS3, SS5, SS6		a) Jackpine WG Site 3 PFR and Regular. b) Site class X, 1 and 2. Black Spruce WG site class X, 1, 2 PFR only	
B	Balsam Fir	Conifer	Balsam	Variable		Balsam fir WG, all site classes	
HWD	Hardwood	Deciduous	Hardwood	Variable		Poplar, White Birch All Site Classes	

Source: Table 5 in 91-96 Plan

2005 Independent Forest Audit
Table 3 - Summary of Planned & Actual Harvest Volumes
MU: Red Lake Forest

Average Planned Annual Harvest Volumes

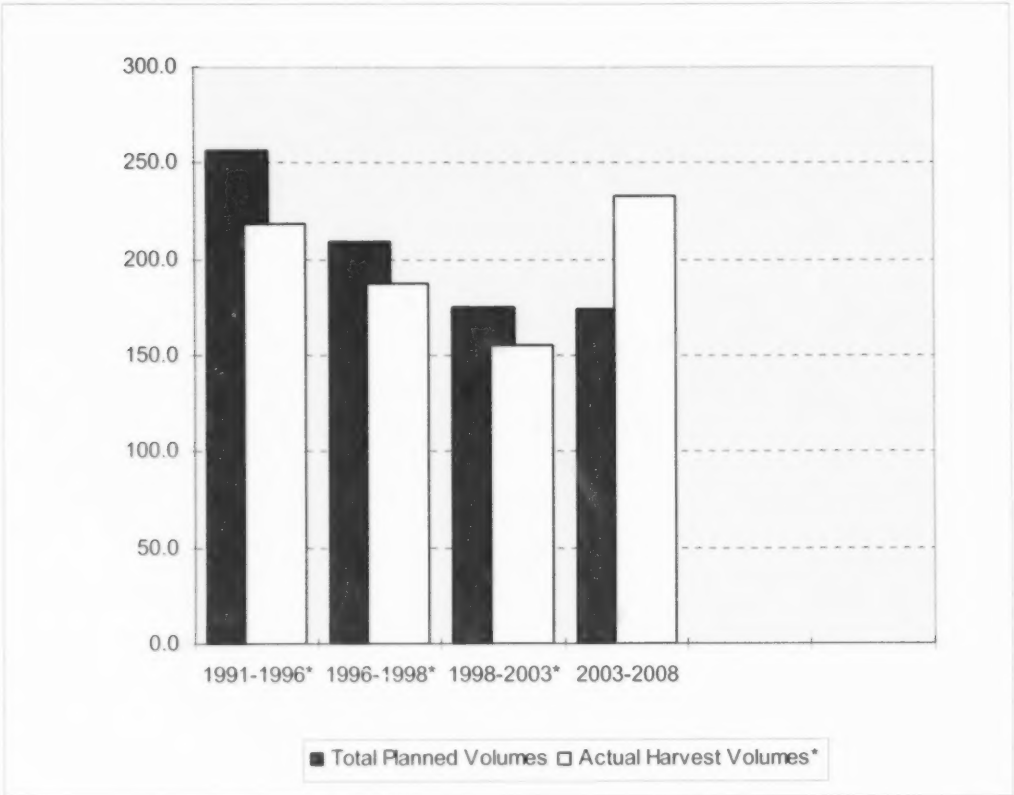
Volumes are Annualized for the indicated 5 year period

	Volume in '000's cubic metres			
	Past Plans			Current
Species	1991-1996	1996-1998	1998-2003	2003-2008
Pj	94.7	78.2	57.6	42.0
Sp	162.0	113.8	99.2	115.6
B	0.0	5.0	4.3	0.9
Oc	0.0	0.0	0.8	3.0
Po	0.0	12.0	11.1	10.5
Bw	0.0	0.0	2.1	1.5
Total Planned Volumes	256.7	209.0	175.1	173.5

Actual Harvest Volumes

Volumes are Annualized for the indicated 5 year period

	Volume in '000's cubic metres			
	Past Plans			Current
Species	1991-1996	1996-1998	1998-2003	2003-2008
Pj	110.8	57.6	47.4	53.7
Sb	104.1	128.3	100.7	177.0
B	0.2	0.2	4.0	0.3
Oc	0.1	0.0	0.0	0.0
Po	3.1	1.0	2.5	2.0
Bw	0.0	0.0	0.2	
Total Actual Volumes	218.2	187.1	154.8	233.0



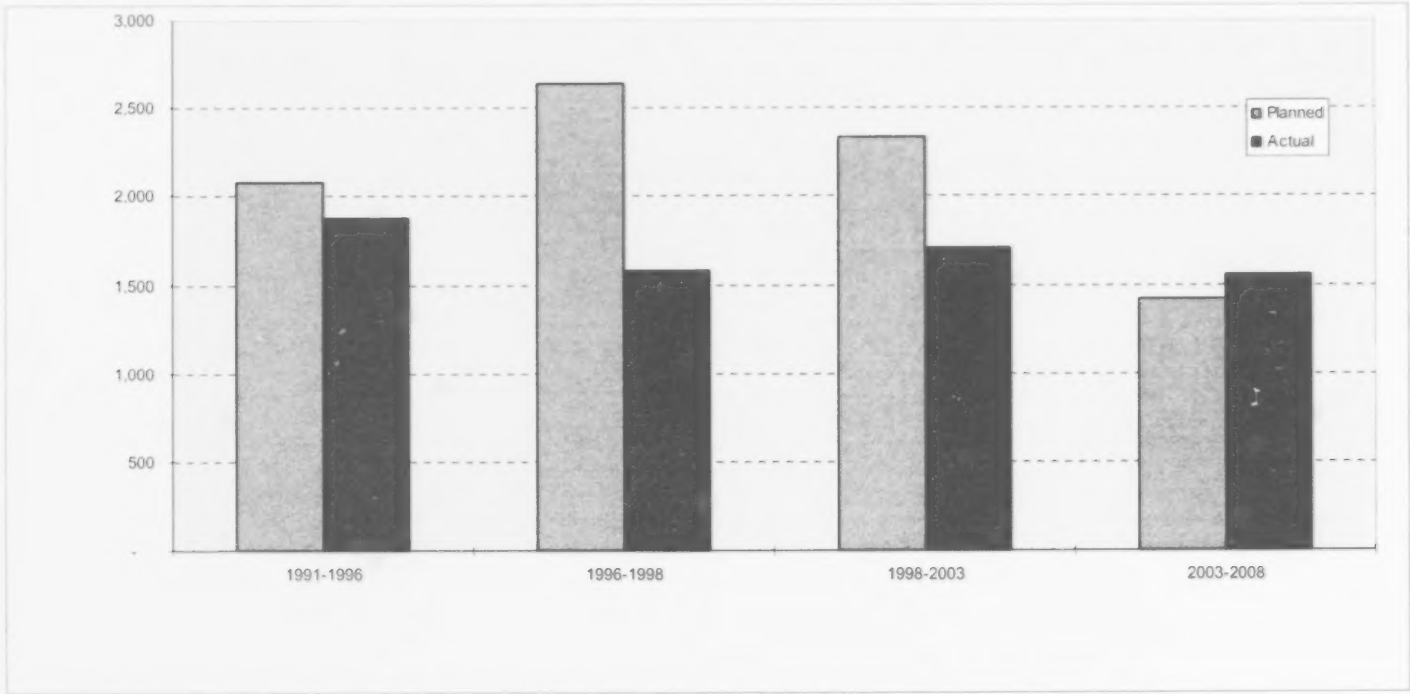
Source: actual and planned 1991-1996: 1996-1998 IFA Trend Analysis Report Table 3
actual and planned 1998-2003: RPFO 4
planned for 2003-2008, FMP 21
actual for 2003-2008: AR 3 from annual report for 2003-2004

2005 Independent Forest Audit
Table 4 – Summary of Planned & Actual Depletion Area
Past and Current Plans
MU: Red Lake Forest

Area is annualized for the indicated 5 year period

Planned Annual Harvest Area					Actual Depletion Area							
	Area in hectares				Area in hectares							
	Past Plans			Current	Past Plans						Current	
Plan Term	1991-1996	1996-1998	1998-2003	2003-2008	1991-1996		1996-1998		1998-2003		2003-2008	
					Harvest	Natural	Harvest	Natural	Harvest	Natural	Harvest	Natural
Pj1	441	500	262	214	514		381	-	226	32	196	
Pj2	430	353	744	176	436		255	8	598	13	120	
Sb1	996	1,482	1,062	685	809		815	16	719	57	1,065	
Sb2	131	125	104	279	33		64	1	60	1	157	
All Pr	0	-	-	-	-		-	-		16	-	
All Bf	47	162	76	-	24		61	4	62	2	-	
Hwd	33	14	84	63	57		8	-	38	2	19	
Total Area:	2,078	2,636	2,332	1,417	1,873	-	1,584	29	1,703	123	1,557	-

Planned vs. Actual Harvest



Source: planned and actual RPFO 2 used for 91-96, 96-98 and 98-03 terms
Planned for 03-08 FMP-18
Actual harvest for 03-08 AR-2 from annual report for 2003-2004

2005 Independent Forest Audit
Table 5 – SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9)

Plan Term: 2003-2008

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of Management	Available	
		(ha)	(m^3)	(ha)	(m^3)		(ha)	(m^3)
ConMx	B&S	0	0	0	0	clearcut	54	0
	1-20	10	0	62	0	clearcut	4,317	0
	21-40	0	0	1	27	clearcut	2,179	54,475
	41-60	41	2,796	478	32,729	clearcut	2,759	188,992
	61-80	16	1,611	364	37,503	clearcut	1,785	183,855
	81-100	19	2,350	223	27,021	clearcut	1,676	202,796
	101-120	0	0	152	18,201	clearcut	905	108,148
	121-140	0	0	85	6,953	clearcut	612	49,878
	141+	0	0	4	201	clearcut	81	4,212
Forest Unit Subtotal		86	6,757	1,369	122,635		14,368	792,355
CoSha	B&S	0	0	0	0	clearcut	1,453	0
	1-20	0	0	8	0	clearcut	8,340	0
	21-40	51	1,241	8	184	clearcut	8,299	203,326
	41-60	24	1,316	29	1,587	clearcut	1,010	55,550
	61-80	54	3,931	6	407	clearcut	1,072	78,256
	81-100	71	6,143	20	1,721	clearcut	986	85,782
	101-120	15	1,359	0	-37	clearcut	827	73,603
	121-140	31	2,255	20	1,476	clearcut	1,053	76,869
	141+	0	0	0	0	clearcut	0	0
Forest Unit Subtotal		245	16,245	89	5,338		23,040	573,386
HwdMx	B&S	0	0	0	0	clearcut	59	0
	1-20	16	0	17	0	clearcut	452	0
	21-40	0	0	76	1,928	clearcut	1,865	47,558
	41-60	154	11,792	724	55,368	clearcut	2,511	192,092
	61-80	178	20,365	191	21,892	clearcut	889	101,791
	81-100	27	3,789	102	14,040	clearcut	388	53,544
	101-120	0	0	36	4,859	clearcut	94	12,784
	121-140	0	0	12	884	clearcut	32	2,288
	141+	0	0	0	0	clearcut	0	0
Forest Unit Subtotal		375	35,946	1,157	98,972		6,290	410,056
PjDee	B&S	0	0	0	0	clearcut	1,142	0
	1-20	63	0	14	0	clearcut	22,526	0
	21-40	0	20	28	1,429	clearcut	17,181	876,231
	41-60	0	17	27	3,373	clearcut	3,922	498,094
	61-80	11	1,897	53	8,827	clearcut	4,606	764,596
	81-100	11	1,965	22	4,131	clearcut	1,551	285,384
	101-120	8	1,359	2	290	clearcut	529	93,633
	121-140	0	0	36	3,257	clearcut	421	38,522
	141+	0	0	3	68	clearcut	18	486
Forest Unit Subtotal		93	5,258	184	21,376		51,896	2,556,946
PoAll	B&S	0	0	0	0	clearcut	498	0
	1-20	0	0	1	0	clearcut	615	0
	21-40	0	0	161	7,339	clearcut	3,940	179,270
	41-60	0	0	620	75,605	clearcut	1,684	205,448
	61-80	45	7,746	194	33,656	clearcut	1,201	208,374
	81-100	8	1,627	45	8,786	clearcut	202	39,794
	101-120	0	0	61	10,983	clearcut	69	12,524
	121-140	0	0	65	4,184	clearcut	138	8,901
	141+	0	0	0	0	clearcut	0	0
Forest Unit Subtotal		53	9,373	1,146	140,554		8,347	654,310

Table 5 continued

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of Management	Available	
		(ha)	(m^3)	(ha)	(m^3)		(ha)	(m^3)
PrMan	B&S	0	0	0	0	clearcut	0	0
	1-20	0	0	22	44	clearcut	260	520
	21-40	0	0	0	-54	clearcut	27	2,970
	41-60	0	0	0	0	clearcut	0	0
	61-80	0	0	0	0	clearcut	0	0
	81-100	0	0	0	0	clearcut	0	0
	101-120	0	0	0	0	clearcut	0	0
	121-140	0	0	0	0	clearcut	0	0
	141+	0	0	0	0	clearcut	0	0
Forest Unit Subtotal		0	0	22	-9		287	3,490
SbDec	B&S	0	0	0	0	clearcut	5,872	0
	1-20	0	0	12	0	clearcut	12,718	0
	21-40	0	0	36	622	clearcut	1,672	29,260
	41-60	0	0	199	13,909	clearcut	5,281	369,670
	61-80	0	0	166	19,092	clearcut	7,243	832,945
	81-100	11	1,580	89	12,787	clearcut	7,087	1,013,441
	101-120	0	0	138	20,739	clearcut	3,599	539,850
	121-140	0	38	49	6,594	clearcut	3,309	448,370
	141+	0	0	9	1,042	clearcut	622	70,908
Forest Unit Subtotal		11	1,619	698	74,787		47,403	3,304,444
SbLow	B&S	0	0	0	0	clearcut	3,124	0
	1-20	62	0	-15	0	clearcut	1,533	0
	21-40	1	0	5	0	clearcut	114	0
	41-60	0	0	6	23	clearcut	976	3,904
	61-80	143	4,997	31	1,093	clearcut	848	29,680
	81-100	452	33,669	24	1,795	clearcut	1,084	80,758
	101-120	1,006	104,131	22	2,257	clearcut	2,249	232,772
	121-140	1,256	143,218	42	4,831	clearcut	4,191	477,774
	141+	366	39,128	70	7,515	clearcut	3,691	394,937
Forest Unit Subtotal		3,286	325,143	186	17,514		17,810	1,219,825
Total All Forest Units		4,149	400,341	4,850	481,165		169,442	9,514,810
Total Productive Forest							178,442	

Source: 2003-2008 Table FMP-9

Table 5 continued
Plan Term: 1998-2003

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of	Available	
		(ha)	(m^3)	(ha)	(m^3)	Management	(ha)	(m^3)
Pj1	B&S	0	0	0	0	clearcut	0	0
	1-20	0	0	9,062	0	clearcut	19,312	0
	21-40	0	0	590	23,600	clearcut	438	17,520
	41-60	0	0	120	13,080	clearcut	684	74,556
	61-80	13	2,067	734	116,706	clearcut	980	155,820
	81-100	0	0	268	49,312	clearcut	349	64,216
	101-120	8	1,424	351	62,478	clearcut	447	79,566
	121-140	11	1,034	750	70,500	clearcut	1,152	108,288
	141+	0	0	86	5,332	clearcut	169	10,478
Forest Unit Subtotal		32	4,525	11,961	341,008		23,531	510,444
Pj2	B&S	0	0	0	0	clearcut	0	0
	1-20	108	0	881	0	clearcut	29,958	0
	21-40	2,283	91,320	0	0	clearcut	1,153	46,120
	41-60	2,091	227,919	423	46,107	clearcut	7,785	848,565
	61-80	196	31,164	661	105,099	clearcut	5,591	888,969
	81-100	33	6,072	229	42,136	clearcut	2,076	381,984
	101-120	2	356	946	168,388	clearcut	1,184	210,752
	121-140	14	1,316	864	81,216	clearcut	2,798	263,012
	141+	0	0	1	62	clearcut	416	25,792
Forest Unit Subtotal		4,727	358,147	4,005	443,008		50,961	2,665,194
Sb1	B&S	0	0	0	0	clearcut	0	0
	1-20	0	0	411	0	clearcut	7,842	0
	21-40	0	0	107	4,280	clearcut	2,759	110,360
	41-60	44	4,796	1,062	115,758	clearcut	6,238	679,942
	61-80	20	3,180	863	137,217	clearcut	9,320	1,481,880
	81-100	0	0	770	141,680	clearcut	5,237	963,608
	101-120	0	0	992	176,576	clearcut	2,790	496,620
	121-140	14	1,316	1,509	141,846	clearcut	5,867	551,498
	141+	0	0	420	24,412	clearcut	4,580	219,543
Forest Unit Subtotal		78	9,292	6,134	741,769		44,633	4,503,451
Sb2	B&S	0	0	0	0	clearcut	0	0
	1-20	0	0	136	0	clearcut	446	0
	21-40	0	0	101	4,040	clearcut	943	37,720
	41-60	53	5,777	0	0	clearcut	474	51,666
	61-80	121	19,239	9	1,431	clearcut	577	91,743
	81-100	68	12,512	26	4,784	clearcut	243	44,712
	101-120	30	5,340	12	2,136	clearcut	399	71,022
	121-140	644	60,536	53	4,982	clearcut	2,056	193,264
	141+	165	7,751	77	4,293	clearcut	2,231	107,834
Forest Unit Subtotal		1,081	111,155	414	21,666		7,369	597,961
AllPr	B&S	0	0	0	0	clearcut	0	0
	1-20	0	0	5	0	clearcut	711	0
	21-40	0	0	0	0	clearcut	0	0
	41-60	0	0	0	0	clearcut	0	0
	61-80	0	0	0	0	clearcut	0	0
	81-100	0	0	0	0	clearcut	0	0
	101-120	0	0	0	0	clearcut	0	0
	121-140	0	0	0	0	clearcut	0	0
	141+	0	0	0	0	clearcut	0	0
Forest Unit Subtotal		0	0	5	0		711	0

Table 5 continued

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of Management	Available	
		(ha)	(m^3)	(ha)	(m^3)		(ha)	(m^3)
All Bf	B&S	0	0	0	0	clearcut	0	0
	1-20	3	0	78	0	clearcut	372	0
	21-40	49	1,960	1,166	46,640	clearcut	983	39,320
	41-60	123	13,407	2,246	244,814	clearcut	7,042	767,578
	61-80	80	12,720	76	12,084	clearcut	800	127,200
	81-100	0	0	29	5,336	clearcut	12	2,208
	101-120	0	0	47	8,366	clearcut	0	0
	121-140	35	3,290	0	0	clearcut	0	0
	141+	53	3,286	0	0	clearcut	0	0
Forest Unit Subtotal		343	34,663	3,642	317,240		9,209	936,306
Hwd	B&S	0	0	0	0	clearcut	0	0
	1-20	397	0	197	0	clearcut	2,657	0
	21-40	209	8,360	49	1,960	clearcut	123	4,920
	41-60	1,023	111,507	1,025	111,725	clearcut	2,713	295,717
	61-80	295	46,905	922	146,598	clearcut	908	144,372
	81-100	86	15,824	415	76,360	clearcut	763	140,392
	101-120	0	0	215	38,270	clearcut	662	117,836
	121-140	0	0	33	3,102	clearcut	130	12,220
	141+	56	3,472	0	0	clearcut	14	868
Forest Unit Subtotal		2,066	186,068	2,856	378,015		7,970	716,325
Total All Forest Units		8,327	703,850	29,017	2,242,706		144,384	9,929,681
Total Productive Forest							181,728	

Source: FMP-9 for 1998-2003

Table 5 continued
Plan Term: 1996-1998

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of	Available	
		(ha)	(m^3)	(ha)	(m^3)	Management	(ha)	(m^3)
Pj1	B&S	0		0		clearcut	15,175	
	1-20	0		298		clearcut	22,900	
	21-40	0		0		clearcut	1,888	
	41-60	0		117		clearcut	3,483	
	61-80	156		25		clearcut	3,631	
	81-100	175		68		clearcut	902	
	101-120	88		86		clearcut	557	
	121-140	794		100		clearcut	751	
	141+	63		41		clearcut	186	
Forest Unit Subtotal		1,276	0	735	0		49,473	1,570,731
Pj2	B&S	0		0		clearcut	10,381	
	1-20	0		166		clearcut	24,268	
	21-40	0		0		clearcut	1,959	
	41-60	743		54		clearcut	7,130	
	61-80	606		78		clearcut	4,168	
	81-100	257		13		clearcut	1,687	
	101-120	1,241		92		clearcut	832	
	121-140	2,122		96		clearcut	1,781	
	141+	137		1		clearcut	282	
Forest Unit Subtotal		5,106	0	500	0		52,488	772,263
Sb1	B&S	3				clearcut	9,922	
	1-20	0		78		clearcut	6,659	
	21-40	0		0		clearcut	3,291	
	41-60	2		524		clearcut	6,132	
	61-80	54		861		clearcut	9,735	
	81-100	51		691		clearcut	5,282	
	101-120	75		901		clearcut	2,575	
	121-140	127		1,503		clearcut	5,677	
	141+	84		330		clearcut	4,432	
Forest Unit Subtotal		396	0	4,888	0		53,705	3,865,737
Sb2	B&S			22		clearcut	2,771	
	1-20			0		clearcut	993	
	21-40			0		clearcut	305	
	41-60			0		clearcut	305	
	61-80	8		3		clearcut	674	
	81-100	0		6		clearcut	441	
	101-120	9		32		clearcut	367	
	121-140	7		12		clearcut	2,123	
	141+	18		0		clearcut	3,584	
Forest Unit Subtotal		42	0	75	0		11,563	447,486
B	B&S					clearcut	341	
	1-20			112		clearcut	0	
	21-40	1		855		clearcut	912	
	41-60	210		1,718		clearcut	7,120	
	61-80	78		31		clearcut	1,072	
	81-100	0				clearcut	30	
	101-120	68				clearcut	0	
	121-140					clearcut		
	141+					clearcut		
Forest Unit Subtotal		357	0	2,716	0		9,475	598,908
HWD	B&S					clearcut	1,962	
	1-20			25		clearcut	1,071	
	21-40			167		clearcut	196	
	41-60			1,003		clearcut	3,020	
	61-80	3		781		clearcut	860	
	81-100			404		clearcut	781	
	101-120	9		185		clearcut	682	
	121-140			33		clearcut	116	
	141+					clearcut	14	
Forest Unit Subtotal		12	0	2,598	0		8,702	696,935

Source: Table 11.1 in FMP 96-98 – includes patent land

Table 5 continued
Plan Term: 1991-1996

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of Management	Available	
		(ha)	(m^3)	(ha)	(m^3)		(ha)	(m^3)
Pj1	B&S					clearcut	26,374	
	1-20					clearcut	3,200	
	21-40					clearcut	2,209	
	41-60					clearcut	4,089	
	61-80					clearcut	3,503	
	81-100					clearcut	1,125	
	101-120					clearcut	1,334	
	121-140					clearcut	1,004	
	141+					clearcut	118	
Forest Unit Subtotal		0	0	0	0		42,956	
Pj2	B&S					clearcut	24,327	
	1-20					clearcut	6,743	
	21-40					clearcut	3,297	
	41-60					clearcut	8,857	
	61-80					clearcut	4,018	
	81-100					clearcut	2,230	
	101-120					clearcut	4,372	
	121-140					clearcut	1,542	
	141+					clearcut	239	
Forest Unit Subtotal		0	0	0	0		55,625	
Sb1	B&S					clearcut	24,916	
	1-20					clearcut	2,552	
	21-40					clearcut	2,019	
	41-60					clearcut	10,393	
	61-80					clearcut	9,561	
	81-100					clearcut	5,086	
	101-120					clearcut	7,972	
	121-140					clearcut	4,273	
	141+					clearcut	5,743	
Forest Unit Subtotal		0	0	0	0		72,515	
Sb2	B&S					clearcut	4,010	
	1-20					clearcut	0	
	21-40					clearcut	41	
	41-60					clearcut	466	
	61-80					clearcut	315	
	81-100					clearcut	186	
	101-120					clearcut	995	
	121-140					clearcut	1,124	
	141+					clearcut	1,986	
Forest Unit Subtotal		0	0	0	0		9,123	

Table 5 continued

Forest Unit	Age Class	Protection Forest		Production Forest				
				Unavailable		Stage of	Available	
		(ha)	(m^3)	(ha)	(m^3)	Management	(ha)	(m^3)
B	B&S					clearcut	900	
	1-20					clearcut	156	
	21-40					clearcut	7,415	
	41-60					clearcut	4,328	
	61-80					clearcut	221	
	81-100					clearcut	41	
	101-120					clearcut	24	
	121-140					clearcut	0	
	141+					clearcut	0	
Forest Unit Subtotal		0	0	0	0		13,085	
HWD	B&S					clearcut	2,532	
	1-20					clearcut	45	
	21-40					clearcut	1,753	
	41-60					clearcut	3,057	
	61-80					clearcut	1,215	
	81-100					clearcut	1,416	
	101-120					clearcut	274	
	121-140					clearcut	13	
	141+					clearcut	0	
Forest Unit Subtotal		0	0	0	0		10,305	
Total All Forest Units		0		0			203,609	0
Total Productive Forest								

Source: table 4.13.1.2 1991-1996 plan for crown production ownership 1 and 3

2005 Independent Forest Audit

Table 6 – SUMMARY REPORT OF RENEWAL,TENDING & PROTECTION OPERATIONS (RPFO-7)

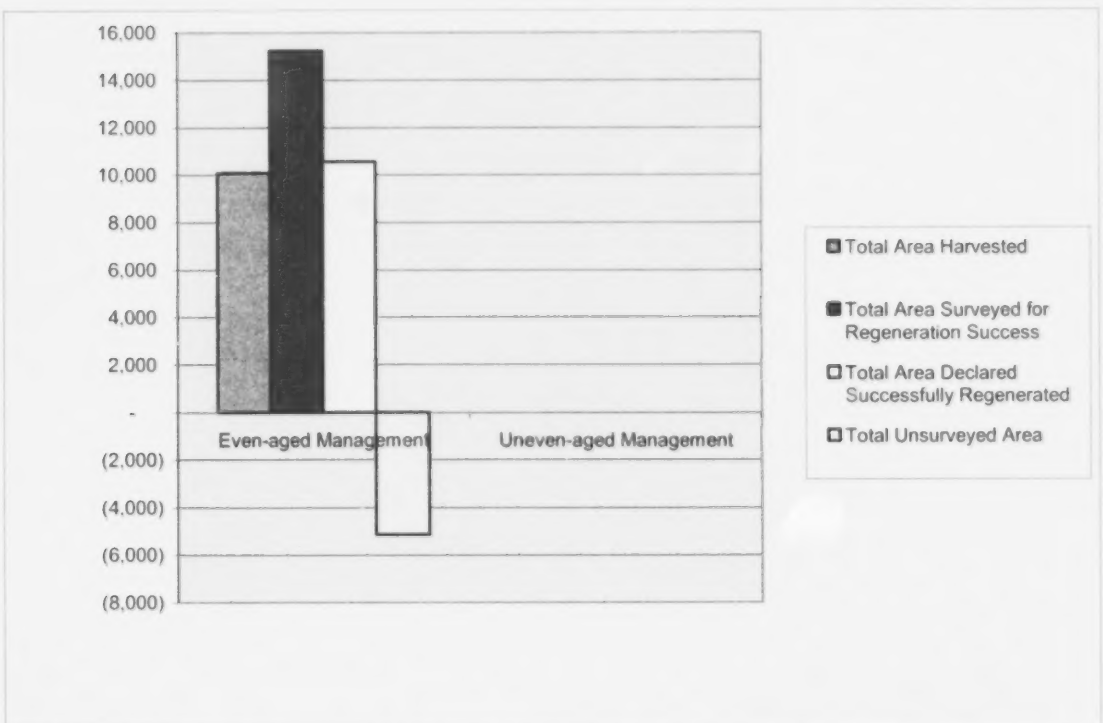
	Area Summary of all Forest Units (ha)							
	1991-1996		1996-1998		1998-2003		2003-2008	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Renewal								
Regeneration								
Uneven-Aged Management								
Selection Cut - Harvest					0	0		
Total Uneven-Aged Management			0	0	0	0	0	0
Even-Aged Management								
Natural Regeneration								
Clearcut	1,928	340	400		1,869	560	1,620	34
Strip Cut	94							
Seed Tree Cut			173					
Uniform Shelterwood Seed Cut								
Subtotal Natural	2,022	340	573	0	1,869	560	1,620	34
Artificial Regeneration								
Planting	3,551	2,219	958	996	4,830	4,616	4,277	1,038
Seeding direct	1,825	2,642	1,140		4,328	4,456	1,404	
with site preparation	369	999	150	313			0	
Scarification	642	288	693	209	61	0	32	
HARO								
Subtotal Artificial	6,387	6,148	2,941	1,518	9,219	9,072	5,713	1,038
Total Even-Aged Management	8,409	6,488	3,514	1,518	11,088	9,632	7,332	1,071
Total Regeneration	8,409	6,488	3,514	1,518	11,088	9,632	7,332	1,071
Site Preparation								
Mechanical	5,354	5,333	2,347	1,487	8,821	7,030	5,562	1,178
Chemical	355	76	0	0				
Prescribed Burn	372	477	80	31	147	227		
Total Site Preparation	6,081	5,886	2,427	1,518	8,968	7,257	5,562	1,178
Tending								
Cleaning								
manual	200	7	50	55	62	0	0	
chemical - ground	155	11	100	0	81	94	125	
- aerial	4,000	811	375	0	3,615	963	809	
mechanical								
prescribed burn								
Spacing, pre-commercial thinning, improvement cutting								
even-aged	500	451	200	8	987	762	750	394
uneven-aged								
Cultivation								
Total Tending	4,855	1,280	725	63	4,745	1,819	1,684	394
Protection (Insect Pest Control)								
accelerated harvest								
salvage								
manual protection								
ground insecticide								
aerial insecticide								
Total Protection		0		0		0		0

Source: 1991-1996 planned & actual: 1995-2000 IFA Trends Analysis Table 6;
1996-1998 planned and actual RPFO-7; 1998-2003 planned and actual RPFO-7 and 7a; planned for 2003 FMP-25 in 2003-2008 plan
actual 2003 annual report

2005 Independent Forest Audit
Table 7 – HARVESTING AREA SUCCESSFULLY REGENERATED – SUMMARY OF ALL FOREST UNITS

MU: Red Lake Forest

	AREA IN HECTARES (All Forest Units Combined)	***AREA IN HECTARES (All Forest Units Combined)***
	Even-aged Management	**Uneven-aged Management**
Total Area Harvested	10,080	-
Total Area Surveyed for Regeneration Success	15,218	-
Total Unsurveyed Area	(5,138)	-
Total Area Declared Successfully Regenerated	10,544	-
Total Area Surveyed Not Successfully Regenerated	4,674	-
NSR	-	-
B&S	-	-
Not Available for Regen. (eg. Roads & landings)	-	-
Other	-	-
Percent of Area Surveyed Declared Successfully Regenerated	69.3%	



Source: total area harvested: RPFO-2 for 1991-1996
Survey results: AR-7 for 1998/99 and AR-7 for 1999/00
The results from the FTG surveys only show the FFU and not the original FU.
The treatment package does not correspond to the planned survey treatment package.
In 2001 approximately 3,000 ha of surveys were conducted on natural disturbance areas, including the budworm killed areas and the large blowdown in the Dixie Lake Area. These surveys were conducted on PjDee and SbDee FU.
Surveys are being conducted in 2005.

Appendix B

Audit Team Members and Qualifications

Audit Team Members and Qualifications

Name	Role	Responsibilities	Credentials
Mr. Rod Seabrook	Lead Auditor	• Overall audit coordination • Oversee activities of audit team members • Review requirements and contractual obligations • Lead review of achievement of management objectives and forest sustainability • Lead audit report preparation	M.Sc. Biology, CEA(SFM), EMS(LA); 24 years forestry experience in Ontario; auditor on 11 Independent Forest Audits (seven as lead auditor), 28 ISO 14001 audits, four CSA Z809 audits, seven SFIS audits and one FSC audit.
	Wildlife/Ecology Auditor	• Review and inspect AOC documentation and practices • Review and inspect aspects of forest management related to environmental practices, values and wildlife protection • Assess access planning and implementation • Assist in assessment of achievement of management objectives and forest sustainability	
Mr. David Wilson	Forest Management Planning Auditor	• Audit planning requirements related to public participation, development, and achievement of planning objectives • Review First Nations participation • Assist in assessment of achievement of management objectives and forest sustainability • Consultation with local FNs • Review First Nation consultation in the forest management planning.	P. Eng, CEA, CEA(SFM), EMS(LA); conducted more than 95 audits including 27 forestry compliance, management systems or certification/verification/registration audits during the past seven years; registration/verification auditor for ISO 14001, AF&PA SFI and CSA Z808/809.
Ms. Gabriele Aleksa	Silviculture Operations Auditor	• Review and inspect silvicultural practices and related documentation • Assist in assessment of achievement of management objectives and forest sustainability	R.P.F.; 24 years experience in natural resource management; resource stewardship agreement (RSA) consultant; developed silvicultural prescriptions; audited private land harvesting practices for litigation purposes.
Mr. Ian McCormack	Harvesting Operations Auditor	• Assess plan implementation • Assess harvesting operations • Review compliance planning • Assist in assessment of achievement of management objectives and forest sustainability	R.P.F.; over 20 years of experience in the forest industry in Northern Ontario; qualified EMS auditor; has worked with KBM on Independent Forest Audits

Name	Role	Responsibilities	Credentials
Mr. Colin Arlidge	SFMM Auditor	• Review the long-term strategic planning in the SFMM cases for the 1999-2004 FMP • Assist in assessment of achievement of management objectives and forest sustainability	R.P.F.; founding partner with MITIG Forestry Services Ltd.; expertise in GIS project management, forest management GIS support, and Strategic Forest Management Model (SFMM) modelling; SFMM Auditor for two Independent Forest Audits in NW Ontario in 2004.
Ms. Terri Dawyd	Secretariat	• Review documentation and practices related to the forest management planning process and public participation • Coordinate document distribution and logistics and audit report preparation	H.B.Sc.F. (candidate); worked with Aboriginal organizations, MNR and contractors on various forestry projects in Northern Ontario; implemented program to increase employment opportunities for Aboriginal people, in the forest sector; organized information sessions and task meetings.

Appendix C

Independent Forest Audit Guiding Principles

Independent Forest Audit Guiding Principles

1. Commitment
Commitment as reflected in vision, mission and policy statements of the company. Vision and mission statements are intended to proved long-term guidance for the organization. Policy statements reflect how the organization's vision and mission will be achieved. These statements must be reflected in the day-to-day operations of the organization.
2. Public Participation
The process of sustainable forest planning, implementation and monitoring is conducted in an open consultative fashion, with input from all members of the planning team, Local Citizens' Committee, Native groups, and other parties with an interest in the operations of the forest unit.
3. Forest Management Planning
The forest management planning process involves the input of a number of individuals and groups to describe the current condition of the forest, the values and benefits to be obtained from the forest, the desired condition of the forest, and the best methods to achieve that goal. Certain minimum standards and procedures have been established upon which all management units are evaluated.
4. Plan Implementation
Verification of the actual results of operations in the field compared to the planned operations is required to be able to assess achievement of the plan objectives and compliance with laws and regulations. In conjunction with the review of operations, the reporting tables are tested to ensure accurate results are reported.
5. System Support
System support concerns resources and activities needed to support plan implementation so as to achieve the desired objectives. Appropriate control, documentation and reporting procedures must be in place and operational. Planned action should occur at planned times, in planned places and to the planned degree.
6. Monitoring
The activities and the effects of these activities in achieving management objectives must be regularly measured and assessed. In particular, the indicators of achievement must be assessed and their effectiveness reviewed.
7. Achievement of the Management Objectives and Forest Sustainability
Periodic assessments of the management of the forest unit operations and the forest unit must be made in order to determine whether forest sustainability and other management objectives are being achieved. This includes comparing the actual values of the predetermined indicator s against the planned values and assessing the reasons for any significant deviations.
8. Contractual Obligations
The Licensee must comply with the specific requirements of the SFL.

Appendix D

List of Acronyms

List of Acronyms

AHA	Available Harvest Area
AOC	Areas of Concern
AR	Annual Report
AWS	Annual Work Schedules
B&S	Barren and Scattered
BNV	Bounds of Natural Variation
CEA	Certified Environmental Auditor
CEA(SFM)	Certified Environmental Auditor-Sustainable Forest Management
CFSA	Crown Forest Sustainability Act
CSA	Canadian Standards Association
EA	Environmental Assessment
EBR	Environmental Bill of Rights
EMS(LA)	Environmental Management System-Lead Auditor
ES	Ecosite
FFC	Forestry Futures Committee
FIM	Forest Information Manual
FMNCP	Forest Management Native Consultation Process
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FOCIS	Forest Operations Compliance Information System
FOIP	Forest Operations Information Program
FOIR	Forest Operation Inspection Report
FOP	Forest Operation Prescription
FRI	Forest Resource Inventory
FTG	Free-to-Grow
FU	Forest Unit
GIS	Geographic Information System
HPA	High Priority Aspect
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
KBM	KBM Forestry Consultants Inc.
LCC	Local Citizens Committee
MNR	Ministry of Natural Resources
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NDPEG	Forest Management Guide for Natural Disturbance Pattern Emulation
NRVIS	Natural Resource Values Information System
OLL	Ontario's Living Legacy Land Use Strategy
P. Eng.	Professional Engineer
PLA	Public Lands Act
RBT	Resource-Based Tourism
RLFMCL	Red Lake Forest Management Company Ltd.
R.P.F.	Registered Professional Forester
RPFO	Report of Past Forest Operations
RSA	Resource Stewardship Agreement
SEV	Statement of Environmental Values
SFL	Sustainable Forest Licence
SFMM	Strategic Forest Management Model
SFM	Sustainable Forest Management
SGR	Silviculture Ground Rule
SMA	Selected Management Alternative
TAR	Comparison and Trend Analysis of Planned versus Actual Forest Operations Report
TMP	Timber Management Plan
TMPM	Timber Management Planning Manual
TPP	Timber Production Potential
WMU	Wildlife Management Unit

Appendix E

Summary of Input to the Audit Process

Summary of Input to the Audit Process

General Public/Other Stakeholders

An advertisement was placed in five local newspapers (*The Northern Sun News* - Red Lake, the *Wawatay News*, the *Sioux Lookout Bulletin*, *The Dryden Observer* and the *Kenora Daily Miner & News*) providing notice of the audit and offering the public an opportunity for input to the audit process. The notice directed the public to contact the Red Lake District Resource Management Advisory Committee or the audit secretariat with any comments regarding forest management activities on the Red Lake Forest.

Public Survey

KBM prepared a one-page public survey that was distributed to all organizations and to a random sample of one-third of the individuals listed in the FMP mailing list. In total, 200 surveys were sent out. In addition, the public notice was posted on and available for download from KBM's web site (www.kbm.on.ca). The purpose of the survey was to solicit public input and to provide respondents with an opportunity to identify and discuss any site-specific concerns on the Forest. Five responses were received and are summarized as follows:

- A respondent had contacted forest managers with concerns during the audit period and was satisfied with the response.
- A respondent had contacted forest managers with concerns during the audit period and was satisfied with the response.
- A respondent was very satisfied with responses when contacting forest managers.
- A respondent who participates in forest management public consultation processes and works in the natural resources field expressed concerns that there was too much cutting taking place.
- A respondent provided a copy of their response to the Draft Plan Review of the Forest Management Plan for the 2003-2008 Red Lake Forest FMP. The respondent expressed concern over aspects of forest modelling and noted several good planning practices.

First Nations

The audit team sent individual letters of invitation to Pikangikum First Nation and Lac Seul First Nation informing them of the IFA of the Red Lake Forest and asking for their to participation. No response was received to the letters. The aforementioned First Nations and all other Aboriginal organizations on the MNR District FMP mailing were also sent the public participation survey and none were submitted. The audit team unsuccessfully tried to arrange interviews with representatives of Pikangikum First Nation, Lac Seul First Nation and an Aboriginal trapper.

Local Citizens Committee

During the site visit, the audit team met with the Red Lake District Resource Management Advisory Committee (LCC) as an agenda item on their September 12, 2005 meeting. Nine members were present for this meeting and provided input for the audit team's consideration. The Chairperson of the LCC also participated in the opening meeting, on the field site visits and in the closing meeting. Audit team members also conducted personal interviews with a number of LCC members during the site visit.

The LCC in the Red Lake District participated in the planning process on three forests and the resulting demand on members' time was very challenging. Interviews indicated that some LLC members questioned the value of time and effort expended because they felt their concerns were not sincerely considered by MNR. LCC members acknowledged the efforts of RLFMCL in making information available.

Overlapping Licensees, Contractors and Commitment Holders

A public survey was distributed to Overlapping Licensees, contractors and commitment holders on the Red Lake Forest to solicit input and to provide each respondent with an opportunity to identify and discuss any site-specific concerns. Commitment holders were satisfied to-date.

Interviews with company officials from receiving facilities expressed a common concern regarding the decreasing AHA and landbase on the Red Lake Forest and the lack of success of efforts to mitigate the

impacts of adjacent park expansions through OLL and the negative impact this is having on future wood supply. There was also agreement on a sense of a lack of urgency in efforts to address the mitigation issue.

SFL Holder
Red Lake Forest Management Company Ltd. (RLFMCL) staff provided significant input into the audit. Methods of input included: providing background documentation such as the forest management plan, the TAR, maps, and guiding of field inspections. The audit team recognizes and appreciates that the staff made great efforts to assemble the field binders and organize many aspects of the audit. Numerous interviews were supported with extensive discussion in the field with RLFMCL staff. These discussions formed a significant basis for understanding forest management on the Red Lake Forest.

Ministry of Natural Resources
Ministry of Natural Resources staff provided significant input into the audit through interviews and preparation of documentation. Representatives from the Red Lake District office, including the District Manager, were present at the pre-audit meeting, and opening and closing meetings, as well as the field site visits. Interviews were conducted with the District Manager, Area Supervisor, Area Forester, Area Biologist, District Planner, Area Technicians, GIS staff and former First Nation Liaison. An MNR Regional representative also participated in the pre-audit meeting and the closing meeting.

The excellent support of the audit process by staff of both RLFMCL and MNR Red Lake District was noted by the audit team.

Appendix F

Public Survey

KBM FORESTRY CONSULTANTS INC.
2005 INDEPENDENT FOREST AUDIT
PUBLIC SURVEY

Every five years, as part of the Province's responsibility for resource management in Ontario, the Ministry of Natural Resources (MNR) contracts firms to evaluate forest management activities on Crown lands. KBM Forestry Consultants Inc. of Thunder Bay, Ontario has been engaged by the MNR this year to conduct an independent forest audit of the Red Lake Forest for the period 2000-2005.

As part of our evaluation, we would appreciate your input as a member of the public with an interest in forest management on the Red Lake Forest. If you have comments related to forestry activities during the five-year period April 1, 2000 to March 31, 2005, please complete and submit this form (please see back of sheet for more information on the audit process).

KBM provides this opportunity to comment on the Red Lake Forest audit, under the authority of Ontario Regulation 160/04 made under the Crown Forest Sustainability Act, 1994. Any personal information provided will be used solely by the audit team as input to the Red Lake Forest Independent Forest Audit. Any questions regarding the collection, use, and retention of the personal information can be directed to Rod Seabrook, Lead Auditor at 807-345-5445 ext. 261 (email: rsea@kbm.on.ca) or to the company address indicated below.

Name: (optional)

Tel. and/or email: (optional)

What is your interest in forest management on the Red Lake Forest?

Recreation ☐
Employment (forestry, tourism, etc.) ☐
Conservation ☐
Other:

Can you identify any specific locations or activities on the Red Lake Forest that illustrate good OR poor management practices, and that the audit team should be aware of in conducting their evaluation? (*Please indicate if we may contact you for more information.* (☐**Yes** ☐**No**)

Have you ever contacted forest managers with comments or concerns during the 2000-2005 audit period? *(e.g., local Ministry of Natural Resources, Red Lake Forest Management Company Ltd.)* (☐**Yes** ☐**No**)

If yes, were you satisfied with the response? (☐**Yes** ☐**No**)

Feel free to add any additional comments (use additional sheet if required).

Please **mail, email, or fax** the completed survey (Attention: Terri Dawyd) to the address/fax number below by **Friday September 2th, 2005**.

The survey can also be accessed through our website, located at www.kbm.on.ca

Although we cannot respond to everyone, we do take into consideration all comments received and thank you in advance for your input.

INDEPENDENT FOREST AUDIT

Red Lake Forest

KBM Forestry Consultants Inc. has been retained by the Ministry of Natural Resources (MNR) to conduct an Independent Forest Audit, consistent with the Crown Forestry Sustainability Act, on the management of the Red Lake Forest.

The audit covers the April 1, 2000 to March 31, 2005 operating period. You are invited to comment on the forest management activities on the Red Lake Forest for this period of time. Please mail, email, or fax this form to:

Ms. Terri Dawyd
KBM Forestry Consultants Inc.
349 Mooney Ave., Thunder Bay, ON P7B 5L5
tdawyd@kbm.on.ca
Tel: (807) 345-5445 ext. 233
Fax: (807) 345-5858
Toll-Free: 1-800-465-3001

(All correspondence sent to KBM is confidential).

Alternatively, comments can be made directly to the Local Citizens Committee Chairperson:

Mr. Floyd Drager
P.O. Box 168, Red Lake, ON, P0V 2M0
Tel: (807) 727-2901

(The privacy of any information given to the LCC may not necessarily be protected).

Comments must be received by **September 2nd, 2005.**

Purpose of the Independent Forest Audit

The Purpose of the audit is to assess:

- compliance with the *Crown Forest Sustainability Act*,
- compliance with the Forest Management Planning Process,
- a comparison of planned versus actual forest management activities,
- the effectiveness of forest management activities in achieving audit criteria and management objectives,
- assess the effectiveness of previous audit action plans, and
- where applicable, a licensee's compliance with the terms and conditions of the Sustainable Forest Licence.

The six-member audit team will evaluate forest management planning and practices such as harvest operations, forest renewal activities, road construction and maintenance as well as opportunities for public input and First Nations consultation. The main objectives of the audit are to assess compliance with provincial laws and regulations as well as comment on the effectiveness and sustainability of forestry activities on the management unit.

In addition, the independent forest audit provides an opportunity to improve Crown land management in Ontario through adaptive management. The audits are conducted by consultants that are independent of the Ministry of Natural Resources and the companies being audited, and firms are selected in an arms-length process by the Forestry Futures Committee of Ontario.

Appendix G

Public Notification

Public Notification

RED LAKE FOREST
INDEPENDENT FOREST AUDIT

KBM Forestry Consultants Inc. of Thunder Bay, Ontario has been retained by the Ontario Ministry of Natural Resources to conduct an Independent Forest Audit, consistent with the *Crown Forest Sustainability Act*, on the management of the Red Lake Forest.

The purpose of the audit is to assess forest management activities within the Red Lake Forest during the five year audit period from April 1, 2000 to March 31, 2005. Specifically:

- **compliance with the *Crown Forest Sustainability Act*;**
- **compliance with the Forest Management Planning process;**
- **a comparison of planned versus actual forest management acitivities;**
- **the effectiveness of forest management activities;**
- **the effectiveness of previous audit action plans; and**
- **compliance with the terms and conditions of the Sustainable Forest Licence.**

You are invited to comment on forest operations on the Red Lake Forest for this period of time. Please provide your comments by Friday, September 2, 2005, directly to the Red Lake District Resource Management Advisory Committee:

Mr. Floyd Drager, Chairperson
P.O. Box 168
Red Lake, ON P0V 2M0
Tel: 807-727-2901

(The privacy of information given to the LCC may not necessarily be protected).

Alternatively, comments can be sent directly to:

Ms. Terri Dawyd
KBM Forestry Consultants Inc.
349 Mooney Avenue
Thunder Bay, ON P7B 5L5
Tel: 807-345-5445 ext. 233
Fax: 807-345-5858
Toll Free: 1-800-465-3001
tdawyd@kbm.on.ca

(All correspondence sent to KBM is strictly confidential.)

For more information or to complete our public audit survey please visit www.kbm.on.ca.